

Mesozoic radiolarians from the European Platform: a review

Patrick DE WEVER

Laboratoire de Géologie, Muséum national d'Histoire naturelle, URA 1761,
43 rue de Buffon, F-75231 Paris cedex 05 (France)

Valentina S. VISHNEVSKAYA

Institute of Lithosphere, Academy of Sciences, ILSAN,
22 Staromonetny, 109 180 Moscow (Russia)

De Wever P. & Vishnevskaya V. S. 1997. — Mesozoic radiolarians from the European Platform: a review, in Crasquin-Soleau S. & De Wever P. (eds), Peri-Tethys: stratigraphic correlations, *Geodiversitas* 19 (2) : 319-381.

ABSTRACT

This paper is primarily concerned with providing an overview of studies on Mesozoic radiolarians and presents a general background of living radiolarians and the different stages they go through (the filters) from their state as plankton to their state as fossils, as geologists find them in rocks. This is followed by a review of the main publications documenting radiolarians worldwide since their discovery. The main purpose of this paper is to present to westerners the various work related to the eastern European platform countries (European part of the former Soviet Union) as the majority of these papers are written in languages unfamiliar to most geologists. We have therefore chosen to present here their historical background, and their location, as precisely as possible, in order to allow further comparisons.

KEY WORDS

radiolarians,
Peritethys,
Mesozoic,
Silica,
plankton.

RÉSUMÉ

Nous présentons ici un survol des études ayant porté sur les radiolaires mésozoïques. Nous nous intéressons d'abord au contexte général des radiolaires en tant qu'organismes vivants et aux étapes qu'ils franchissent (les filtres) depuis leur état d'organisme planctonique jusqu'à leur état de fossiles, tels que le géologue les rencontre dans les roches. On envisage ensuite les principaux travaux à travers le monde permettant de mieux les connaître, depuis leur découverte. Le principal but de cet article est de mettre à la disposition de la communauté occidentale les résultats portant sur la partie orientale de la plate-forme européenne (partie européenne de l'ex-Union Soviétique), ces travaux étant le plus souvent difficile d'accès à la plupart des géologues. Nous avons donc choisi de présenter ici leur contexte historique, et leur localisation, aussi précisément que possible, afin de permettre leur utilisation et des comparaisons ultérieures.

MOTS CLÉS

radiolaires,
Péritéthys,
Mésozoïque,
Silice,
plancton.

INTRODUCTION

Stratigraphical correlation has been hampered by lack of world-wide cooperative studies. Now that scientific exchange is easier between Eastern and Western workers the solutions to many stratigraphic problems may be found through joint projects and enable researchers to compile a more complete fossil record. Improved networking can now allow interested workers to develop models that will facilitate more accurate interpretations of geological basins. The goal is to make biostratigraphical basin analyses a more useful tool both for industry and for academics. Some fossil groups have been studied for a long time, are relatively well known and their correlations between several basins are possible, even though still imperfect. On the contrary, other fossil groups remain almost ignored with potentially important groups often overlooked as stratigraphic tools. The utility of these groups is excellent when systematic conformity is applied by the specialist communities. The changing relationship of some fossils groups with other groups often signals changes in basin and oceanographic conditions. Taxonomic and stratigraphic syntheses are published or in preparation from Tethyan regions but often no correlation is possible with geographical areas which were under Boreal influence. This gap in our knowledge results from: (1) different palaeogeographic domains (Boreal *vs* Tethyan); (2) the fact that much of the Boreal data was acquired in eastern countries where methods and technical means are different (*i.e.* no common use of the scanning electron microscope). Comparisons between the relevant fossil assemblages are problematical partly because of the inaccessibility of much of the published literature, especially in reference to the taxonomy, and partly because of the lack of good photographic illustrations in the published monographs.

In order to progress towards the correlation between Boreal and Tethyan basins it is first necessary to standardise the different biological chronometers of the existing studies available. The objective is to consolidate information so that other geologists interested in these deposits

can use the interrelationship of microfossils as a valuable tool. Other indirect benefits are to be able to understand Russian terminology in translation, and eventually, standardise terms. Our project will be accomplished by developing a three-fold process, each part of which can be carried out simultaneously. Firstly a state of the knowledge has to be settled: this is the objective of the present paper. Secondly the systematics must be dealt with (re-examination of the taxonomy of some selected fossil groups from western basins and from the Russian Platform, Caspian Sea Region, Siberian Lowlands, North Kazakhstan, ... which have been worked on by many specialists). Thirdly, to develop biostratigraphical and palaeoenvironmental application by comparisons of lithology, geologic history, abundance and diversity with other fossils. This enormous task will then allow problems to be jointly stated and solutions to be recorded.

To extrapolate the original biological environmental signals from the geological features recorded requires a good knowledge of (i) successive filters which have changed it and of (ii) the originators of these signals (*i.e.* the radiolarians). Radiolarians have existed since the Cambrian (Nazarov & Ormiston 1993) and comprise several thousand species. They were disregarded for stratigraphic purposes for a long time, but since Riedel (1952, 1957) proved their stratigraphical worth, they have been studied more thoroughly, especially since the 1980's and their high value is now established. Because of the difficulty extracting radiolarians from siliceous rocks, the first zonations were only proposed for the Cenozoic and the Mesozoic during late 1970's (beginning with the Cretaceous then the Jurassic and later for Triassic times) and for the Palaeozoic since the 1980's.

INTERPRETATION OF OBSERVATIONS

The initial stratigraphic problems were due to the initial taxonomy which used an unnatural taxonomic system and which did not reflect phylogenetic relationships. This phase in the progress of Cenozoic radiolarian taxonomy and stratigraphy has depended largely on material collected. As more natural groupings replace the artificial ones

of Ehrenberg and Haeckel, genera and families that extend from Palaeozoic to Mesozoic, or from Mesozoic to Cenozoic, become the peculiarity rather than the rule (Riedel 1967b). The Haeckelian system of radiolarian classification now persists in use only to the extent that the arduous task of the tracing of phyletic relationships remains incomplete. Disputable taxonomy for some radiolarians hampers the registering of assemblages in their entirety, at the level of species, many taxa are variously delimited by different authors, so that a work has little utility unless it describes and illustrates (or refers to a published, illustrated description of) the morphological variability involved for each name. A perplexing decision to be required, at the beginning of an investigation of radiolarian stratigraphy, is the extent to which it is appropriate to quantify abundances of taxa. It is generally unsatisfactory to record only presences and absences, because the observation of hundreds of specimens of a taxon in an assemblage clearly carries more weight in interpretations than does a single specimen. And an absence recorded after searching through few specimens has less meaning than one recorded after searching through ten thousand. On the other hand, it can be a futile effort to count abundances with great precision, unless detailed palaeoenvironmental interpretations are the main goal. When thousands of specimens are present on each slide, as it is commonly the case in Cenozoic radiolarian studies, it is possible to conduct a middle policy between excessive and insufficient quantification by estimating how many specimens must be searched through, to find a certain number of specimens of the taxon being recorded, and then converting this number to a ratio of the total assemblage. The resulting estimates of abundance are useful not only for the weighting of biostratigraphic events but also for broad-scale palaeoenvironmental indications. Preservation of the radiolarians is another important factor in stratigraphic interpretations, for the recording of which there are not, as yet, any satisfactory conventions. It is not unusual for authors to record assemblages as "well *vs* poorly preserved", "slightly *vs* greatly corroded", etc., and these indications are useful in evaluating the signifi-

cance of absences of delicate species from the assemblages, or concentrations of particularly robust species.

FROM PLANKTON TO ROCK

Radiolarians, present in all oceans and open seas, are floating predators and include in their cytoplasm symbiotic algae (zooxanthellae) which also contribute to their nutrition. Several groups of radiolarians have a high endoplasmic content of oil-droplets. A connection with volcanism, which has always been presumed, is erroneous. Radiolarians live in the upper part of the water column and do not require a deep ocean. A latitudinal distribution does exist for radiolarian associations. It is also possible to differentiate surface from subsurface assemblages. In sediments below upwelling sites a mixture of fauna systematically occurs: cold and warm-water species as off Peru where Antarctic waters are mixed with tropical waters (De Wever *et al.* 1995, NAUTIPERC), surface and subsurface waters as off Somalia (Caulet *et al.* 1992). Hence, the chances of distinguishing Tropical-Tethyan as against Boreal fauna when working on fossil radiolarians extracted from radiolarite are almost non-existent since radiolarite facies result from upwelling systems (De Wever *et al.* 1994, *elf*). It is therefore necessary to investigate radiolarians from other facies to be able to depict bioprovinces and the sediments of the Russian platform, having both Tethyan and Boreal influences, are good candidates. Polycystines (a Superorder), with their siliceous skeleton, are the only radiolarians *s.l.* which are preserved as fossils. At present, among Polycystines, the order of Nassellarians are the most diversified, although those of the order of Spumellarians seem to be the most abundant (Lombari & Bowden 1982).

After death, an individual test is at least partially dissolved during its settling through the water column, then while it lies on the sea floor and finally within the sediment. Most of the radiolarians that settle occur in faecal pellets. Sediments deposited at the same time as the biota tend to average out the background variations such as seasonal changes. Robust forms and those of blooms are over-represented in sediments when

compared with the common plankton (Swanberg & Bjørklund 1992). The numbers of individuals and species are lower in sediment (and *a fortiori* in the rock) than in plankton. It is estimated that less than 1% of the silica fixed by planktonic organisms in surface waters is preserved within the geological record. This difference is greater when planktonic individuals are not abundant. Radiolarians may be abundant in relatively shallow basins close to a shoreline where prevailing chemical conditions favour their preservation and where detrital input is very low, e.g. the Santa Barbara Basin, off California at a depth of below 500 m (Kling 1979). Other examples can be quoted in Norwegian fjords (Swanberg & Bjørklund 1992). Abundant radiolarians and foraminifers frequently share the same geographical water domains but in sediments they are often mutually exclusive: when siliceous fossils are preserved, calcareous ones are not and *vice versa*. Radiolarians behave as other planktonic organisms: the most important factor being the abundance of nutrients, not the abundance of silica. A scenario where transgressions are associated with a significant input of organic matter and a radiolarian bloom has been proposed by Steinberg (1981) for the main epochs of silica deposition.

The biogenic silica Opal-A is unstable and transformed into Opal-CT then into quartz. Transformations from opal to quartz are separated by a liquid stage (Carr & Fyfe 1958; Mizutani 1966). Temperature and time strongly affect silica diagenetic phases (Murata & Larson 1975). Hence, chert prevails in older or deeper sediments and porcelanites in younger or shallower ones. Silica phase transformations are accompanied by porosity reduction. The original porosity is higher when the sediment is richer in silica and during diagenesis (Isaacs 1981). For the geologist, the porosity decrease (volume) corresponds to a diminishing of only one dimension (the thickness) and the important decompacting factor has to be taken into account when accumulation rate and palaeoproductivity calculations are made (De Wever *et al.* 1994). In addition to pressure and temperature, time favours both opal transformations. Cherts thus

are more prevalent in older sediments (Palaeozoic and Mesozoic) and porcelanites in more recent ones (Cenozoic). The transformation of Opal-A to Opal-CT is estimated to occur at 25-50° and takes 20 m.y. in areas of low to moderate sedimentation rates and 5-10 m.y. in areas of high sedimentation rates (Kastner 1981). The Opal-CT to quartz transformation occurs within 40-50 Ma (Keene 1976). All the possible modifications which affect a radiolarian test (dissolution in the water column, near the sediment-interface and during diagenesis) after its death are so great that the chances for a skeleton to be observable by a geologist are almost zero, especially when one adds the etching with hydrofluoric acid to free the test from the rock in the laboratory.

POTENTIAL IMPORTANCE OF RADIOLARIAN CONTRIBUTION TO MARINE PETROLEUM SOURCE ROCKS

As shown by Lisitzin (1971), those areas in modern oceans that have high organic productivity are invariably rich in diatoms and/or radiolarians, and these are deposited in the bottom sediment. Primary production of organic matter in the present-day marine environments is mainly assumed by various group of unicellular, microscopic planktonic organisms. Radiolarians were probably an important producer during Palaeozoic and early Mesozoic times when planktonic foraminifers, coccoliths and diatoms had not emerged (Ormiston 1993). Production of biogenic silica and marine organic matter both result from a high planktonic activity (Takahashi 1986; Diester-Haass *et al.* 1992; Caulet *et al.* 1992; Sarnthein *et al.* 1992) but do not always remain associated in sediment (De Wever & Baudin 1996).

Some source rocks have their kerogen present as structureless, amorphous material not attributable to any specific organism. It is not uncommon, however, to read references to such structureless amorphous material as being of "algal" origin despite a lack of rigorous proof. It is suggested by Ormiston (1993) that radiolarians, which are a common biotic element in source rocks, could have contributed significantly to their organic richness as they are known to

contain significant concentrations of lipids, even though the identity of those lipids remains a mystery. A steady contribution of radiolarian lipids to ocean sediments could have been mediated by the minute faecal pellets (minipellets 10 to 30 μm in size) these organisms have recently been found to produce (Gowing & Silver 1985). The main biochemical components of radiolarians consist of carbohydrates, protein and lipids, the latter being an important component of organic molecules accreted in the sediment. Certain colonial radiolarians are particularly lipid-rich (Anderson 1983). The organic carbon content of such colonial radiolarians is, naturally, high. If this lipid-rich material accretes in substantial amounts in oceanic sediment, it ought to be a significant contributor to organic richness of those sediments. Some modern colonial species which are lipid-rich (see illustrations in De Wever 1994) and have a preservable skeleton are abundant at certain times of the year in oceanic waters. Calculation reveals a significant potential contribution of lipid input to modern ocean sediments by colonial radiolarians. We can reasonably infer that ancient radiolaria also contained substantial lipid-rich vacuoles as these are so important, both as a food resource and as an aid to flotation. Radiolarians are predators and feed from a diverse range of food sources (Swanberg & Anderson 1985) which suggests that they would have access to such a selection of molecules that their biochemical make up might be highly varied. Moreover, their symbionts contribute to an important extent to the lipid droplets included in their central capsula, either directly or indirectly (Anderson 1983). The directness of the pathway from these symbiotic algal cells to the lipid droplet of radiolarians suggests that those lipid droplets in radiolarians might have molecules with an "algal signature". Research is still needed to recognise possible biomarkers in living radiolarians. The identification of a diagnostic radiolarian would not only provide a means to identify radiolarian contribution to lipid-richness of ancient sediment. At least until such chemical evidence is available one should include palaeontological study of body fossils in any study attempting palaeoenvironmental characterisation

of such sedimentary rocks because of several factors: (1) silica may act as a diluent of the organic matter (Bogdanov *et al.* 1980; Aplin *et al.* 1992); (2) porosity has an important role in the preservation or otherwise of the organic matter, permitting exchanges, oxygenation or action of sulphates which destroyed it (Aplin *et al.* 1992). To conclude, there is a relation between organic matter and silica but there is more than one parameter that influences their abundance in sedimentary rocks and these factors' identity and importance are not well identified yet. They both result from a high productivity but, as their conditions of preservation are not the same, they are not systematically associated in sedimentary rocks. It would now be of great interest to compare these Mesozoic depositional sites with some other related facies such as phanites of Western Europe.

HISTORICAL BACKGROUND

In order to present a general scope of the studies, we have chosen to address the general state of world-wide knowledge, with special emphasis on Europe, before providing all the information from Russian platform in a more detailed form.

Although Ehrenberg (1854-1856) had sufficient marine sediments and land-based samples to provide a general portrait of Cenozoic radiolarians, he did not possess good Mesozoic samples. Consequently it was Zittel (1876) who described the first few Cretaceous radiolarians from northern Germany. At about the time that Haeckel (1881, 1887) was publishing his taxonomic system of radiolarians collected by the *Challenger* Expedition, Rüst (1885, 1898) was working on a broadly based investigation of European Mesozoic and Palaeozoic assemblages. Rüst applied Haeckel's generic names, initiated for Cenozoic radiolarians, to his pre-Cenozoic forms. An unfortunate consequence is that many of the genera introduced by Haeckel in 1881 have, as type species, Mesozoic forms described by Rüst (1885) from poorly preserved assemblages, because Haeckel's descriptions of species did not materialize until 1887. Accordingly many of Haeckel's genera are not as firmly based

as they would have been with well-preserved Cenozoic forms as their type species, and a tendency was initiated for Cenozoic and Mesozoic forms to be assigned to the same genus, encouraging an impression that radiolarian genera have long stratigraphic ranges. During the following decades, Cretaceous radiolarians were described from many scattered localities (Table 2), but there was little stratigraphic progress because of the unnatural taxonomic system used. In an effort to overcome this obstacle, Hinde (1897, 1900) began to expand the remark by Rüst (1892) that Mesozoic radiolarian assemblages include higher ratio of cyrtoid species than do Palaeozoic ones. Although this method of approximate age determination was questionable, as was underlined by Tan in 1931, it was still being used, in a somewhat elaborated way, for example, by Kobayashi & Kimura in 1944. Reports of the end of the 19th century are essentially descriptive, and the studied samples are often undated because the absence of any other fauna. The modern phase of Mesozoic radiolarian stratigraphy started with Khabakov (1937), who understood that the seemingly extended stratigraphic ranges of many taxa were the repercussion partly of the unnatural taxonomic system, and partly of mistaken age-determinations of strata. Researchers used Haeckelian systematics for decades (e.g. Campbell & Clark 1944; Campbell 1954). Since the work by Riedel on Cenozoic material (1952, 1953) revealed the Haeckelian system inappropriate, it became clear that the taxonomic system for Mesozoic radiolarians would have to be reconsidered and that it is disjunct from that for the Cenozoic (Riedel 1967b). Indications for a sudden change in fauna at or near the Cretaceous/Paleocene boundary are documented by Lipman (1952) and Foreman (1968) resulting in ensuing large numbers of new genera and several new families being described for the Mesozoic (Foreman 1968; Dumitrica 1970; Pessagno 1969a, b, ...). During the 1960's, some stratigraphic charts were published for Cretaceous radiolarians, but these were generally of local applicability. Zhamoida (1972) compiled a summary of Mesozoic radiolarian occurrences in the "Pacific mobile belt", and Zhamoida & Kazintsova (1981) reviewed Mesozoic radiolarian

literature appearing between 1967 and 1978. In the 1970's, the Deep Sea Drilling Project (DSDP) afforded the chance to correlate the evidence between continental and marine localities, making possible the construction of stratigraphic charts of wide applicability, and also allowing the calibration of radiolarian occurrences with calcareous microfossil groups zonations.

TRIASSIC

Despite the great diversity existing among Upper Norian and Rhaetian radiolarians, relatively few taxa have been described.

World (excluding Europe)

Pacific, Atlantic, Indian. None.

America. Some earlier studies in North America were published by: Martin *et al.* 1915, and Smith 1916. A new set of studies was initiated on western North America by Pessagno *et al.* (1979) in Baja California. Pessagno & Blome (1980) studied the evolution of pantanelliid radiolarians and described species of several other genera from the upper Norian on Queen Charlotte Islands. Blome (1984a, b) further studied this fauna, described new species and proposed a preliminary radiolarian zonation for the Upper Triassic of western North America with the topmost Triassic subzone, the *Betracium deweveri* Subzone, based on upper Norian faunas of Monotis age from the same locality. Further investigations in the Queen Charlotte Islands were undertaken by Carter (1990, 1993) who also studied the diverse Rhaetian fauna from the Sandilands Formation and proposed three preliminary radiolarian assemblages. Subsequent studies have included documentation of the Triassic-Jurassic boundary in northern Queen Charlotte Islands (Tipper & Carter 1990), evolutionary trends in latest Triassic and earliest Jurassic faunas (Carter 1994; Tipper *et al.* in press) and a phylogenetic study of the genus *Ferresium* (Carter 1992). In the northern Cache Creek Terrane of southern Yukon, Canada, upper Norian radiolarians have been reported from a chert sample by Cordey *et al.* (1991). Elsewhere in western North America, Blome, Reed & Tailleux (1989) found upper Norian radiolarians. Yeh (1989) studied radiolarians in

the upper part of the Fields Creek Formation, east-central Oregon. His fauna (sample FC35) is suggested to be Lower Jurassic, but it compares closely with radiolarians from the Sandilands Formation and is more likely Rhaetian according to Carter (1993) who described and illustrated much of the Rhaetian fauna of the Queen Charlotte Islands.

SE Asia (Japan, Indonesia). In Indonesia Hinde (1908) investigated well-preserved radiolarians from a number of Moluccan localities (notably on Roti and Savu) which he believed to

be Triassic, and described some eighty species, predominantly spherical and elliptical forms, multi-segmented cyrtoids, together with some closed cyrtoids and three-armed spongy forms. Brouwer (1921) believed this assemblage to be Late Jurassic. In the Phillipines, more recently Cheng (1989) illustrated upper Norian radiolarians from bedded chert of Uson Island. Further studies in this area by Yeh (1990; 1992) and Yeh & Cheng (1996) indicate that, in addition to faunas of late Ladinian and late Carnian age, two radiolarian assemblages dated as late Norian and

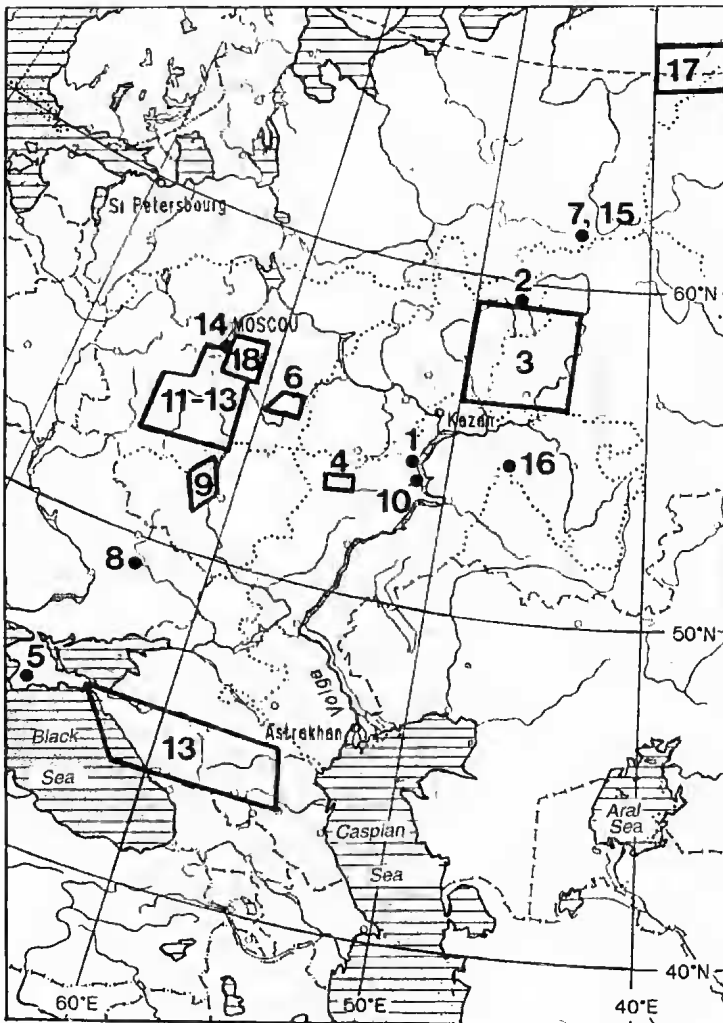


FIG. 1. — General map of eastern Peri-Tethys domain showing the investigated regions listed on table 1. Main areas of investigation are marked with zones. The numbers refer to those given on table 1. Detail maps are provided on Figs 2, 3.

TABLE 1. — List of publications dealing with Mesozoic strata of the Russian platform. Each publication has a number which corresponds to that on figures 1-3. For each publication, the age, region, latitude and longitude, subject of investigation, paleoenvironment and other involved fossil groups are provided.

n°	Author	Age	Region	Longitude Latitude	Subject of investigation	Paleoenvironment	Other group of fossils
1	Kariski 1889 <i>in</i> Petrushveskaya 1986 p.144	K2 st	Simbirsk (Uljanovsk)	48°15'E, 54°25'N	Presence of rads was established	Rads ooze from "santonian clay"	no information
2	Khudyayev 1931	J2 cl. J3 km-K1 nc	Povolgie Sysola Riv. Bas.	52°20'E, 59°35'N 49°30'-52°30'E, 60°00'-61°00'N	Rads from phosphate F ^o 49 sp., (with 20 n.sp.)	Marginal sea	Ammonites
3	Khabakov 1937	J3-K1 nc	Basin Vjatke Riv. Basin Kama Riv	50°00'-53°00'E, 56°00'-61°00'N	Rads from 2 horizons: Volgian and Neocomian 94 gen. & species	Upwelling zone	Ammonites
4	Lipman 1952	K2 st-cp	Kuznezsk district of Penza region	47°00'-48°00'E, 53°20'-53°50'N	Descript. of 48 sp. with 37 n.sp.	Moderate water	Forams
5	Gorbachik & Druchiz 1959	K1 al	Crimea	34°15'E, 45°20'N	Presence of rads in clay	Shallow water	Forams
6	Aliiev & Smirnova 1969	K1 al	Vladimir district	40°10'-41°30'E, 55°15'-56°30'N	Presence of rads in clay	Shallow water	Forams
7a	Kozlova 1971	J3 km	Pechora basin	57°E, 62°N	First quotation of rads list of 6 n.sp.	Shallow water	?
7b	Kozlova 1976	J3 V	??	??	numerous rads, 1 n.sp.	Shallow water	?
8	Gorbunov 1971	K1 al	Slavjansk	37°30'E, 49°00'N	badly preserv. rads from clay and sand	Shallow water	no data
9	Sichera & Semenov 1982	K2 st	Voronezh	38°00'-39°00'E, 51°30'-52°00'N	well preserved rads in sand	altern. shallow & moderate waters	no data
10	Bragina 1987	K2 st	Uljanovsk	48°00'E, 54°00'N	<i>id.</i>	<i>id.</i>	no data
11	Vishnevskaya 1987	K1 al-K2 cp	1-Moscow 2-Vladimir 3- Brjansk	37°00'-39°00'E, 55°00'-55°30'N 39°00'E, 56°00'N 35°E, 54°-55°N	Biozonation	Moderate water depth	1- <i>Inoceramus</i> 2- Forams 3- Forams in K1 al
12	Vishnevskaya & Kazinova 1990	K1-2	Central Russian platform	30°-50°E, 40°-60°N	Comparison of rad. biozones	no info.	no info.
13	Vishnevskaya 1993	K1-K2	1-Moscow 2-Precaucasus	37°-39°E, 55°00'-55°30'N 37°-40°E, 44°30'-45°30'N	Rads zonation + illustration	Moderate water-depth	Forams
14	Bragina 1994	K2 t-cp	Khotkovo of Moscow district	37°30'E, 55°30'N	Rads stratig.	?	<i>Inoceramus</i>
15	Kozlova 1994	J3 km	Pechora	57°30'E, 62°30'N	presence of rads	no info.	Macrofauna
16	Amon & De Wever 1994	K2	Povoigie	50°-60°E, 50°-60°N	Comparison of biozones	shallow water	Forams
17	Amon 1985	K2 t-cp	Usa river	57°-67°E, 66°-67°N	Rads biozone	shallow water	
18	Kazinova & Offeriev in press	K1 al	Moscow region	37°-39°E, 55°N	Rads from "Paramonov" clay	shallow water	Forams

early Rhaetian are present also.

In New Zealand, radiolarians from Kapiti Island (Torlesse Terrane) studied by Blome, Moore, Simes & Watters (1987) are coeval with upper Norian faunas from the Monotis beds at Kunga Island. In the Waipapa Terrane, Aita (in Sporli & Aita 1988) figured a mixed fauna of Upper Triassic and Lower Jurassic Tethyan radiolarians from the red chert of Kawakawa Bay. Further references to this fauna and its use in solving complexities of terrane accretion in New Zealand are found in Sporli, Aita & Gibson (1989).

From Japanese cherts Yehara (1927) illustrated six rather nondescript circular forms from Shikoku. Other localities (Kimura 1944a, b) suspected to be Triassic yielded poorly preserved circular radiolarians, spongy forms with three arms, and closed cyrtoids. Since the late 1970's a number of radiolarian zonal schemes for the Upper Triassic have been proposed by workers in Japan. Amongst these Yao, Matsuda & Isozaki (1980) established three successive radiolarian assemblages of Middle Triassic to Early Jurassic age from continuous sequences of chert in the Inuyama area, central Japan. The lower assemblage is Middle Triassic; the middle one is Late Triassic, and the upper one is Early Jurassic. The Late Triassic assemblage was later separated into three sub-assemblages (Yao *et al.* 1980); the upper two of these were proposed for late Norian and Rhaetian forms, respectively. Numerous undescribed taxa were also figured at this time. In 1982, Kishida & Sugano established five assemblage zones for Triassic strata from the Chichibu Belt in the Kochi and Oita Prefectures, Japan. Kishida & Hisada (1986) renamed and subdivided some of their assemblages. Matsuoka figured upper Norian radiolarians from the southern subbelt of the Chichibu Belt, Kochi Prefecture (1983b) and discussed faunas from the Togano Group (1984b).

Subsequently Sato, Murata & Yoshida (1986) established the Betraccium deweveri Zone for upper Norian strata in the southern part of the Chichibu Terrane in Kyushu. Yoshida (1986) examined a Late Triassic to Early Jurassic bedded chert sequence in Kagamigahara City, Gifu Prefecture, central Japan, and subdivided it into seven radiolarian zones.

Also notable are the works published by Ishida (1983), Kishida & Sugano (1982), Kojima (1982), Matsuda & Isozaki (1982), Nakaseko & Nishimura (1979a, b), Takashima & Koike (1982), Yao (1972, 1979, 1981, 1982a, b, 1983, 1986), Yao, Matsuoka & Nakatani (1982). In northern China, in initial studies of radiolarians from the Nadanhada Range, Kojima & Mizutani (1987) figured upper Norian and Rhaetian taxa from Triassic bedded chert. Subsequently, Kojima (1989) discussed the accretionary history of terranes along the continental margin of East Asia during Mesozoic time using Middle and Upper Triassic radiolarian assemblages (including some upper Norian and Rhacian taxa) to point out similarities between the Nadanhada-Western Sikhote-Alin Terrane, and the Tamba-Mino-Ashio Terrane of southwest Japan. Implications are that the Nadanhada Range is the northern extension of the Japanese terrane. The history of this Mesozoic superterrane is further discussed by Mizutani, Shao & Zhang (1990) along with similar tectonostratigraphic terranes in the Ryukyu arc, the Philippines and probably Borneo. A more recent paper by Yang & Mizutani (1991) outlines the geology and biostratigraphy of the Nadanhada Terrane, presents preliminary revision of parasaturnalids, and describes new parasaturnalid taxa of latest Triassic and early Jurassic age.

In eastern Russia, Triassic faunas in the Sikhote-Alin Terrane, Sakhalin Island (Verchojan areas), and the Koryak Upland were studied by Bragin (1986, 1991a, b, 1994). Radiolarians and conodonts of mid Early Triassic to latest Triassic age (including late Norian and Rhaetian faunas) are present in chert sequences at Sikhote-Alin where seven radiolarian zones and seventeen conodont zones have been established. These forms are discussed and illustrated and new taxa are described. Goltman (1969) listed radiolarian genera occurring in the Triassic of Pamir, but until they are illustrated a comparison with other fauna is impossible. Among other publications from Asia one can also mention the works by: Bailey & Mc Callien (1953); Hudson *et al.* (1954); Ichikawa (1950); Kimura (1944a, b); Kobayashi & Kimura (1944b); Scrivenor (1929); Yehara (1927); Zhamoida (1958).

Europe (excluding the Russian platform)

Records of radiolarians are still relatively rare in Triassic sedimentary rocks if the variety of levels involved is considered. In fact, most of the information available to date has been obtained from Alpine faunas.

Triassic radiolarians have been recognised for a long time but comprehensive studies are quite recent. Indeed, following a preliminary note in 1887, Rüst recorded in 1892 about twenty species from twenty-eight Triassic samples of central European hornsteins and calcareous limestones. In the same year, Parona figured about a dozen poorly preserved forms including some with circular and elliptical outlines together with apparently spongy forms with three and four arms. Cyrtoids, of which some are multisegmented and conical and others with inflated middle and lower sections and apparently closed, tubular prolongations are also documented by Parona (1892). Wirz (1945) illustrated a few circular and chambered radiolarians in thin sections of dolomite from south of Lake Lugano (Italy). Most of these assemblages are not sufficiently well-described to permit comparison with faunas described in more recent papers. Following some other minor studies (Winkler-Hermaden 1934; Andrusov 1950), a renewal will come from several Austrian sequences of clays and limestones, Kozur & Mostler (1972) described some fifty well-preserved radiolarians belonging to the emended Coccoisicids, astracturids, heliodisicids, saturnalids and veghicyclids. In their study of Middle and Upper Triassic radiolarians, Kozur & Mostler (1981), Kozur (1984a, b) described a great number of new species and new genera from the Potschenkalk (Sevat) and Zlambach marls (Rhaetian) of Austria. Lahm (1984) figured Middle and Upper Triassic taxa from northern Italy and Austria; some of these ranging upward into the Sevat and Rhaetian. During the 1970's and 1980's there was a renewal of interest on these levels (from Greece, Sicily and Turkey: De Wever *et al.* 1979; De Wever 1982a, b; from Austria and Northern Italy: Donofrio & Mostler 1978; Kozur & Mostler 1978, 1979a, b, 1981, 1983, and subsequent work; from the Carpathians: Dumitrica 1977, 1978a, b; Dumitrica *et al.* (1980); from Yugoslavia:

Gorican & Buser 1990; from northern Italy: Lahm, 1984 ...).

Samples yielding radiolarians are rare and localities wide-spread but, in Europe, mainly concentrated in the Tethyan realm: from Austria, Italy, Slovenia, Serbia, Montenegro, Albania, Greece and Turkey. Most of the Triassic bioevents have been inter-correlated and calibrated with Conodonts or Ammonites or Pelecypods. No well-preserved and comprehensively described Boreal or sub-Boreal faunas are known in sufficient number to be able to be considered as representative. Only recently some faunas have been recorded in Russia from northern Siberia (Egorov & Bragin 1995).

This synopsis illustrates that radiolarian workers around the world have shown a renewed interest in upper Norian and Rhaetian faunas since 1980, and that the tempo of research has accelerated quite rapidly in the past five years. Despite this intensity, the majority of the Rhaetian fauna remains undescribed.

JURASSIC

World (excluding Europe)

Pacific, Atlantic, Indian, America. None besides the paper from Colom (1954) in the Atlantic Ocean. **America.** Following some preliminary work by Bonet & Trejo (1956), Riedel & Schlocker (1956) and Smith (1916), the first substantial papers dealing with Early Jurassic radiolarians from Northern America were published by Pessagno and his collaborators (Pessagno & Blome 1980, 1982; Pessagno & Whalen 1982) and more recently by Yeh (1987). In the Caribbean apparently only one questionable paper by Vermunt (1937) can be quoted. Mattson & Pessagno (1979) reported Late Jurassic and Early Cretaceous radiolarians in Puerto Rican cherts and limestones. Pessagno (1977b) was able to erect a radiolarian zonation for the Late Jurassic, on the basis of forms occurring in cherts and limestone nodules in California.

SE Asia (Japan, Indonesia, Far East Russia). In the circum-Pacific region, Hinde (1917) listed poorly preserved Late Jurassic radiolarians in cherts from several localities in the Celebes.

Some general quotations of Jurassic radiolarians in SE Asia may be found in Bailey & Mc Callien (1953), Hudson *et al.* (1954), Huzimoro (1938), Kawada (1953), Khabakov (1932, 1937), Khudyoev (1931), Kimura (1944a), Kobayashi (1935), Tromp (1947, 1948), Yehara (1927), Zhamoida (1972), and from Indonesia in Brouwer (1921), Hinde (1917), Krumbeck (1922) and Vogler (1941). Coomaraswamy (1902) recorded the presence of Jurassic radiolarians together with plant remains in India. A broad summary of Late Jurassic and Cretaceous radiolarians, with a definition of seven distinct assemblages, was provided by Nakaseko & Nishimura in 1981. Since then recent workers are elucidating Japanese occurrences such as Aita (1982), Mizutani (1981), Matsuoka (1982a, 1983a) and numerous other workers.

Europe (excluding the Russian Platform)

The pioneer work on Late Jurassic radiolarians was based on Italian and Swiss localities. Rüst (1885) provided the original descriptions of assemblages from jaspers, flints and siliceous shales from a number of localities in the Allgau (southern Germany) and Austria (Urschlaun) and from redeposited pebbles in western Switzerland. He also obtained rich assemblages from coprolites from iron mines at Ilsede, further north in Germany (near Hannover). This important paper presented seventy-two species dated as Late Lias-Early Dogger by associated ammonites. Rüst (1885) also recorded radiolarians in the Tithonian (Aptychus beds) from the Alps, in the flysch of Teisendorf (in the Achatal), in the flysch from Traustein (Upper Bavaria) and also from Neocomian levels of the Carpathians near Podbiel. Wisniowski (1889) described moderately preserved forms in siliceous concretions from the vicinity of Krakow, Poland.

Italian authors described diverse assemblages from flint nodules in limestones at Cittiglio (Parona 1890), and radiolarite and siliceous shales at Spezia (Vinassa 1898a, b, 1899), Monginevro (Squinabol 1913) and the Bolognese (Neviani 1900). Cayeux (1896) reported calcitized radiolarian skeletons in Tithonian limestones in the region of the Ardeche in southern France. Cayeux (1897) mentioned poorly

preserved Jurassic radiolarians (*Sch. inflata* ammonite Zone) in the "Gaize" from Argonne, from Cher (France).

Muzavor (1977) described well-preserved radiolarians from siliceous marl at Oberaudorf (Bavaria). Steiger (1981) illustrated well-preserved forms from limestone turbidities in the vicinity of Salzburg. From broadly based studies of Tethyan assemblages the first radiolarian biozonations for Europe were made by Baumgartner *et al.* (1980) and Kocher (1981).

Radiolarian biostratigraphic schemes for Jurassic and Cretaceous sequences were proposed by Tikhomirova (1984, 1987) and Kazinsova (1984) for the Carpathians and the Lesser Caucasus, but, as these investigations are based on thin sections they are out-of-date and probably inaccurate.

Other early papers dealt with Jurassic levels from Western Europe (Andrusov 1950; Anonymous 1959; Bergounioux 1950; Cayeux 1891, 1896; Downie 1956; Cita 1965; Dacqué 1933; Deflandre 1953; de Lapparent 1925; Dunikowski 1882; Furrer 1951; Geyer 1961; Heitzet 1930b; Jacob & Nicorici 1957; Innocenti 1927; Jaccard 1909; Jodot 1931; Kraus 1914; Leischner 1961; Pantanelli 1880, 1887-1889; Parona 1892; Protescu 1933; Rüst 1885, 1898; Sido & Sikabonyi 1953; Termier & Maury 1928; Trauth 1950; Vadasz 1952; Vinassa 1898a, b, 1899; Weynschenk 1950, 1951; Winkler-Hermaden 1934). Data for Jurassic radiolarians are numerous in folded Tethyan terranes and radiolarians are the main constituents of the rocks for numerous Late Jurassic localities (in all the radiolarite type facies). A large number of papers have been published during the last two decades including: Baumgartner 1980; De Wever 1982a, b; De Wever *et al.* 1986b; Dumitrica 1970; Gorican 1994, ...

The first biostratigraphically significant papers dealing with Early Jurassic radiolarians were published recently from Tethyan realm (Pessagno & Poisson 1981; De Wever 1981a, b, 1982a; De Wever & Origlia-Devos 1982; Gorican 1994).

An available set of stratigraphic markers can be based on some recent work (Gorican 1987, 1994) and on the synthesis published by the InterRad group (1995). In spite of the abun-

dance of work published during the two last decades, most of them deal with the Tethyan realm and almost no significant publications relate to the true Boreal realm. No well preserved Boreal or sub-Boreal faunas are described in the literature and only some radiolarian species are mentioned in very sparse localities [Scotland: Dyer & Copestake 1989 and Russia: Khabakov 1937 (illustration of the latter is too poor to be useful), and more recently Bragin (1994) and Bragin & Bragina (1995)]. Therefore, at present, there is no reliable general datum available to use for the Boreal province.

No warm *vs* cold faunas have been identified with confidence to date in western Europe. This is mainly due to the fact that much of the currently available information has been gathered from radiolarite-type facies and that this type of sedimentary rock was deposited under the most active parts of upwelling systems (see above De Wever *et al.* 1994).

CRETACEOUS

World (excluding Europe)

Some general reports (by topic or by location) were published by Krasnyi *et al.* (1962), Rüst (1887), Socco (1905) and, in Africa, by Magné & Sigal (1953).

Pacific, Atlantic, Indian. Several studies based on DSDP material have contributed to the taxonomic and stratigraphic understanding of Early Cretaceous radiolarians (Moore 1973; Riedel & Sanfilippo 1974; Foreman 1975). DSDP sequences from the North and Central Pacific have contributed very substantially to Middle and Late Cretaceous stratigraphic zonation (Foreman 1971, 1975; Schaaf 1981) and for a predominantly taxonomic study by Empson-Morin (1981). Late Cretaceous radiolarian stratigraphy in the Eastern Atlantic has been aided by the Deep Sea Drilling Project (Petrushevskaya & Kozlova 1972; Foreman 1978b). DSDP sequences drilled in the eastern Atlantic provided information on radiolarian stratigraphy in that region (Foreman 1978b; Basov *et al.* 1979, for the Early Cretaceous). Foreman (1977) summarised occurrences in the Atlantic Ocean and its borderlands, and refined the Late Cretaceous zonation of that region.

DSDP cores from the eastern Indian Ocean provided the basis for the description of three stratigraphically significant assemblages in the Middle and Late Cretaceous (Renz 1974). Moderately preserved Late Cretaceous radiolarians are recorded in Indian Late Cretaceous phosphatic nodules by Garg & Jain (in press).

America. Among some of the earliest works conducted in North America one can cite: Bolin 1956; Campbell & Clark 1944; Crandell 1952; Eicher 1960; Foreman 1966; Göke 1959; Hinde 1894; Nauss 1947; Payne 1962; Ransome 1894; Riedel & Schlocker 1956; Rubey 1929; Rüst 1892, 1898; Searight 1938; Tyrrell 1890; Woodward & Thomas 1885, 1895; and for South America: Galavis 1951; Richter 1925; Stainforth 1948; Thalman 1946; and for Caribbean: Ayala-Castanares 1959; Brönnimann & Rigassi 1963; Foreman 1966; Palmer 1934; Pessagno 1960, 1962, 1963; Vermunt 1937. The circum-Pacific region is represented by descriptions of radiolarian assemblages from the Cenomanian of California (Pessagno 1971a) and of Costa Rica (Schmidt-Effing 1980).

Radiolarians are recorded in Campanian limestones of Puerto Rico (Pessagno 1963), and as pyritized skeletons in the Late Cretaceous of Venezuela (Galavis 1951). Also, in the Caribbean region, the Deep Sea Drilling Project has provided data on Late Cretaceous radiolarian stratigraphy (Sanfilippo & Riedel 1976). Mid-Cretaceous radiolarians were reported by Basanovski (1991) from Central America (Cuba). For North America, the earliest record of Cretaceous radiolarians is from the Pierre shale of Manitoba, by Rüst (1892, 1898). Occurrences of Albian and Campanian radiolarians in Alberta were recorded by Wall (1975). Campbell & Clark (1944) described a diverse Campanian assemblage from California, and a sparse Franciscan assemblage was recorded by Riedel & Schlocker (1956). Californian assemblages were exploited to greater stratigraphic advantage by Foreman (1968) and Pessagno (1970, 1971a, 1972, 1973 and 1976). The paper last cited established eight Late Cretaceous radiolarian zones in California, and described a substantial number of new taxa. Pessagno (1977b) proposed a Berriasian to Albian zonation and a large number of new taxa on the

basis of assemblages from calcareous nodules from a number of Californian localities.

E Asia (Japan, Indonesia, Far East Russia).

The first investigation of Early Cretaceous radiolarians in the circum-Pacific belt was conducted by Hinde (1900), who investigated them in numerous samples of cherts, marls and limestones from Central Borneo. From the Cretaceous chalks on the Indonesian island of Rotti, Tan Sin Hok (1927) described a diverse, well-preserved assemblage that is now believed to be between Albian and Turonian in age (Riedel & Sanfilippo 1974). Nakaseko *et al.* (1979b) distinguished a number of stratigraphically significant assemblages through the Cretaceous and Palaeogene of Japan, and compared them with zonal schemes developed for deep-sea sequences. A more recent compilation of the stratigraphy of Japanese Middle and Late Cretaceous radiolarians, defining zones and a number of new taxa, was produced by Taketani (1982).

Descriptions of radiolarian assemblages from the Cenomanian of Sakhalin include Kazintsova (1981). Among others, the following works were published: Alicv 1961a, b, 1965; Dundo & Zhamoida 1963; Hudson *et al.* 1954; Karitskii 1889; Khabakov 1932, 1937; Khudyaev 1931; Kozlova & Gorbovets 1966; Lipman 1952, 1960; Mittermaier 1896; Nakaseko *et al.* 1965; Rao 1932; Vassoevich 1938. From Australia and New Zealand publications include: Crespini 1946, 1960; Dun *et al.* 1901; Etheridge & Dun 1902; Hinde 1893; Foreman 1966. From Indonesia: Brouwer 1921; Foreman 1966; Tan 1927; Vogler 1941. Berriasian blocks in a Turonian chert matrix yield well-preserved radiolarians from Tibet (Wu & Li 1982), and Dundo & Zhamoida (1963) investigated Valanginian radiolarians in siliceous volcanogenic rocks from the Far-Eastern USSR.

Nakagawa & Nakaseko (1977) listed and illustrated radiolarians from a Jurassic and an Early Cretaceous locality in Japan. A Late Cretaceous radiolarian occurrence in manganese carbonate ore in Japan is described by Yao (1979).

Europe (excluding the Russian platform)

As is the case for the Jurassic, most of the initial research on Early Cretaceous radiolarians was

based on European material but today current investigations are more widely dispersed.

Coprolites and siliceous limestones from Zilli (Saxony) and Gardenazza (northern Italy) provided most of the Early Cretaceous forms described by Rüst in his paper of 1888, and ten years later he added forms from the cherty limestones of Cittiglio in northern Italy (Rüst 1898; see also Parona 1890). Fischli (1916) illustrated a diverse faunal assemblage from flints in a Swiss conglomerate. Sollas (1873) mentioned radiolarians in coprolites from the Cambridge Greensand and, 30 m below, in the Gault Clay from Bedfordshire (UK). *Quarterly Journal of the Geological Society* (p. 78) and Grimes (1895: 345) described two species from the Lower Greensand of Surrey (UK). In 1883, Wallich recorded the presence of four genera of radiolarians in the cavities of hollow cherts from Surrey (UK). Fritsch (1893) recorded the presence of eleven species in marly beds of Prisen (Senonian) from Bohemia, and Deecke (1894) some radiolarians in chalks flints at Rügen. Hill & Jukes-Browne (1895) mentioned the presence of radiolarians in chalks of the Melbourne Rock (UK). Cayeux (1897) mentioned twenty-seven genera and described numerous species of Turonian radiolarians from SE, N and NW of the Paris Basin (France) and from smectite du Hevre (Belgium). Holmes (1900) recorded twenty genera and forty-one species from the chalk in Surrey (UK). Zittel (1876) described the first Cretaceous radiolarians from northern Germany, in spite of a poorly preserved fauna. Tethyan radiolarian assemblages of Middle Cretaceous age have been described by Squinabol (1914) from the Veneto region of Italy. Raven G. (before 1911) mentioned the presence of Upper Cretaceous radiolarians in Arnager limestones (Island of Bornholm, Denmark).

Over the decades, Cretaceous radiolarians have been described from scattered localities (Andrusov 1950; Anonymous 1959; Colom 1954; Corti 1896; Custodis & Schmidt-Thomé 1939; Deecke 1895; Elbert 1902; Fric 1893; Furrer 1951; Grimes 1895; Heitzer 1930; Hill 1912; Hill & Jukes-Brown 1895; Holmes 1900; Jodot 1931; Lombard & Schröder 1939; Neviani 1900, 1901; Pantanelli 1880, 1887, 1889;

Parona 1890; Perner 1891; Protescu 1933; Rüst 1887, Squinabol 1903, 1904, 1914; Sujkowski 1931; Vasicek 1947; Vinassa 1901; Vinassa 1900; Wallich 1883; Wetzell 1933, 1961). In the 1960's evidence accumulated for an abrupt evolutionary change at or near the Cretaceous/Palaeocene boundary (Lipman 1952; Foreman 1968), and consequently, large numbers of new Cretaceous genera and several new families have been described (e.g. by Cita 1965; Foreman 1966, 1968; Dumitrica 1970; Herm 1962; Empson-Morin 1981).

Baumgartner *et al.* (1980) proposed a preliminary stratigraphy based on a number of widely scattered radiolarian assemblages from the Tethyan region. Boyanov & Lipman (1973) were able to use a poorly preserved radiolarian assemblage to determine the Early Cretaceous age of Bulgarian siliceous shales previously considered to be Palaeozoic, and Lozynyak (1969) recorded assemblages of this age from the Ukrainian Carpathians. In the Kuznetsk area of the Russian Platform, Lipman (1952) recorded numerous radiolarian taxa in samples from drilled wells. Goltman (1971, 1975) recorded occurrences in limestones and marls of the Tadzhiksk Depression, culminating in a useful stratigraphic compilation (Goltman 1981). Lipman (1960) described numerous assemblages of Coniacian to Danian age in wells and surface exposures of the Western Siberian Lowland, and Kozlova & Gorbovets (1966) described characteristic complexes for the Turonian to Campanian deposits of that region.

Tethyan radiolarian assemblages of Middle Cretaceous age have been described by Kozlova in Basov *et al.* (1979) from a DSDP Site off Spain, and by Dumitrica (1970, 1975) from Romanian marls and radiolarite.

In spite of the abundance of work published during the two last decades, most of them deal with the Tethyan realm and almost no significant papers consider the true Boreal realm. No well preserved Boreal or sub-Boreal faunas are described in the literature. Some species are only recorded rarely from very isolated localities and therefore there is no available datum to use in confidence for the Boreal province and we have chosen to omit such datums from the Cretaceous chart. Biostratigraphic data exists in a series of

papers among which the most significant are Jud (1994) for the zones in Early Cretaceous, Erbacher (1994) and O'Dogherty (1994) for the middle part of Cretaceous, Sanfilippo & Riedel (1985) and Khoklova *et al.* (1994) for the Late Cretaceous together with Urquhart (1994) and Bragin (1995) for the Late Cretaceous of Cyprus. By the Late Cretaceous, the Tethyan environment for the accumulation of radiolarian sediments had practically disappeared, and a Palaeogene pattern was developing. The only substantial occurrences in the Mediterranean region are in the north Italian *Euganei* (Squinabol 1903, 1904), and in Greece (De Wever & Thiébaud 1981). There are significant records in Senonian and Turonian shales of Czechoslovakia (Perner 1891), in Campanian chalks of northern Germany (Zittel 1876) and in France and Belgian Campanian silicified limestones (Cayeux 1897).

DANIAN-PALAEOCENE

Publications dealing with this time period are not numerous. Literature recording occurrences from Asia includes the following work: Hollis 1991; Vishnevskaya 1981-1988c; Basov & Vishnevskaya 1995; from the Atlantic realm: Saito *et al.* 1966; from the East Indies: Reinhard & Wenk 1951; from Europe: Anonymous 1959; Stoesche & Hiltermann 1940; Twerenbold 1955; Borisenko 1958, 1960, Kozlova 1993 and from North America: Frizzell & Middour 1951.

RADIOLARIAN STUDIES FROM THE RUSSIAN EUROPEAN PLATFORM

Khudjaev I. E. (1931) in a paper entitled "On the Radiolaria in the phosphates in the region of the Syssola River" described forty-nine species, belonging to ten genera, where twenty-eight species were determined as new. They are *Cenosphaera komiensis* n.sp., *C. syssolae* n.sp., *C. sp. indet. N1*, *C. sp. indet. N2*, *Carposphaera affinioides* n.sp., *Lithapium supraspinosum* n.sp., *Lithocyclia ovalis* n.sp., *Porodiscus sp. indet. N1*, *P. sp. indet. N2*, *Cornutanna ovalis* n.sp., *Dicolocapsa trapezoidalis* n.sp., *D. sp. indet. N1*, *D. sp. indet. N2*, *Tricolocapsa multipora* n.sp.,

Phormocampe favosa n.sp., *Dictyomitra multipora* n.sp., *D. spicularia* n.sp., *D. biporosa* n.sp., *Lithocampe syssoletensis* n.sp., *L. sp. indet. N1*, *L. sp. indet. N2*, *Cyrtocapsa rusti* n.sp., *Stichocapsa chabakovi* n.sp., *S. regularis* n.sp., *S. quadripora* n.sp., *S. kassini* n.sp., *S. zyrjanica* n.sp. and *S. wisingiana* n.sp.

Khabakov (1937) in his paper "Radiolarians from Lower Cretaceous and Upper Jurassic phosphorites of Vjatka and Kama River Basins" described nineteen genera and seventy-five species of radiolarians.

Lipman (1952) in her monograph "Materials on

monographic study of Upper Cretaceous radiolarians from the Russian platform" described forty-eight radiolarian species, where thirty-eight were described as new species. They are: *Cenosphaera minor* n.sp., *C. mammilata* n.sp., *Cenellipsis elliptica* n.sp., *Xiphosphaera irregularis* n.sp., *Cromyodruppa concentrica* n.sp., *Cenodiscus lens* n.sp., *Spongoprunum crassum* n.sp., *S. angustum* n.sp., *S. articulatum* n.sp., *Trochodiscus spiniger* n.sp., *Triacticus triacuminatus* n.sp., *Porodiscus vulgaris* n.sp., *Stilodictya delicatula* n.sp., *S. placentalis* n.sp., *Tripodictya triacuminata* n.sp., *Euchitonia santonica* n.sp., *Hagiastrium crux* n.sp.,

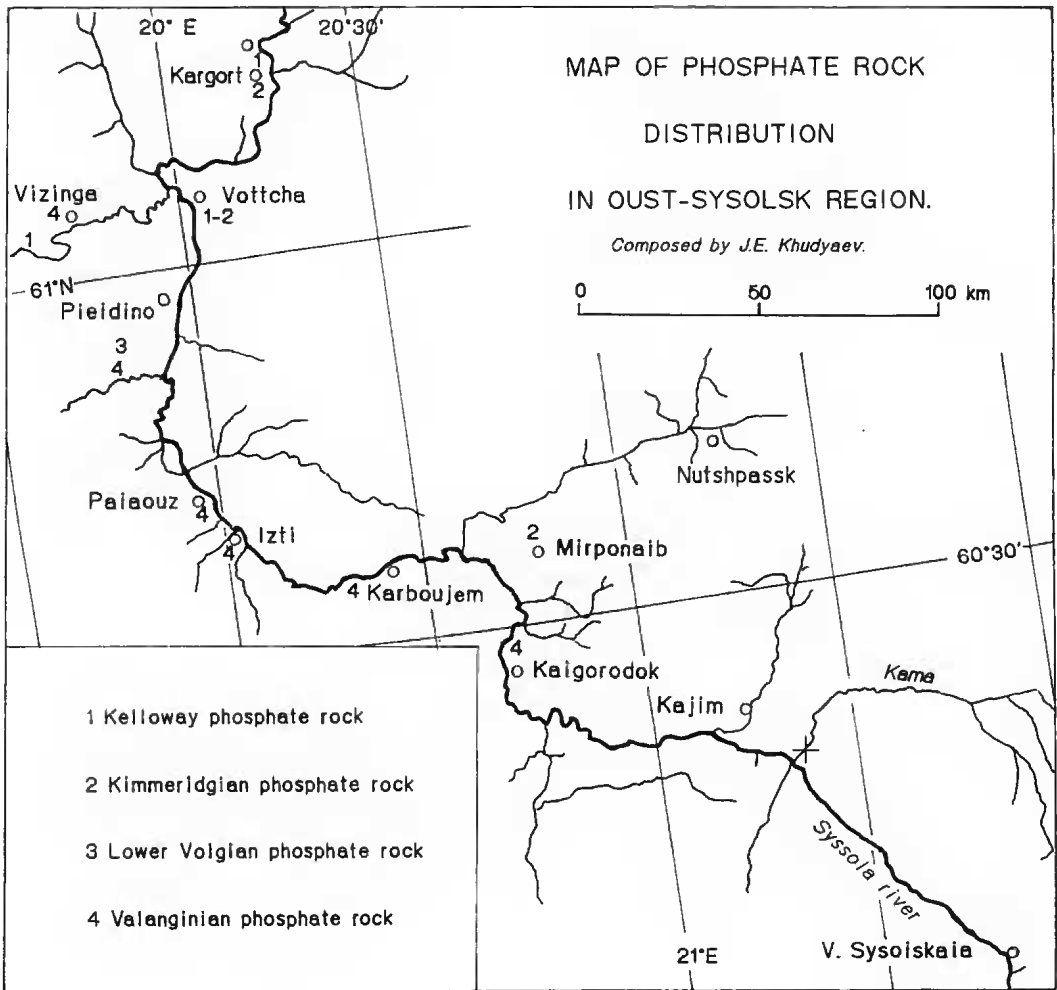


FIG. 2. — Location map of sites reported by Khudyaev (1931) in published investigations of Oust-Sysolk region (20°-21°E, 30°N).

Histiastrum cruciferum n.sp., *H. aster* n.sp., *H. membraniferum* n.sp., *H. irregulare* n.sp., *Tessastrum quadratum* n.sp., *Rhopalastrum trigonale* n.sp., *R. tumidum* n.sp., *R. ingens* n.sp., *R. attenuatum* n.sp., *Spongodiscus impressus* n.sp., *Spongodiscus citrus* n.sp., *S. maximus* n.sp., *S. volgensis* n.sp., *Spongotropus aculeatus* n.sp., *Stylotrochus hexacanthus* n.sp., *S. dolichacanthus* n.sp., *S. actacanthus* n.sp., *Lithostrobos turritella* n.sp., *Dictyomitra scalaris* n.sp., *D. gigantea* n.sp., *D. striata* n.sp. All species derived from Santonian-Campanian clay of Penza region.

Aliev & Smirnova (1969) in their paper "New species of radiolarians from Albian of Central areas of the Russian platform" described from Upper Albian (40 m thick) clay, with Albian foraminiferas of the Vladimir district, six new species: *Porodiscus kavilkinensis* Aliev n.sp., *P. inflatus* Smirnova et Aliev n.sp., *Sethocyrtis mosquensis* Smirnova et Aliev n.sp., *Theocampe cylindrica* Smirnova et Aliev n.sp., *T. simplex* Smirnova et Aliev n.sp., *Stichocampe cuneatus* Smirnova et Aliev n.sp. and one subspecies *Dictyomitra ferosia* Aliev subsp. *angusta* Smirnova

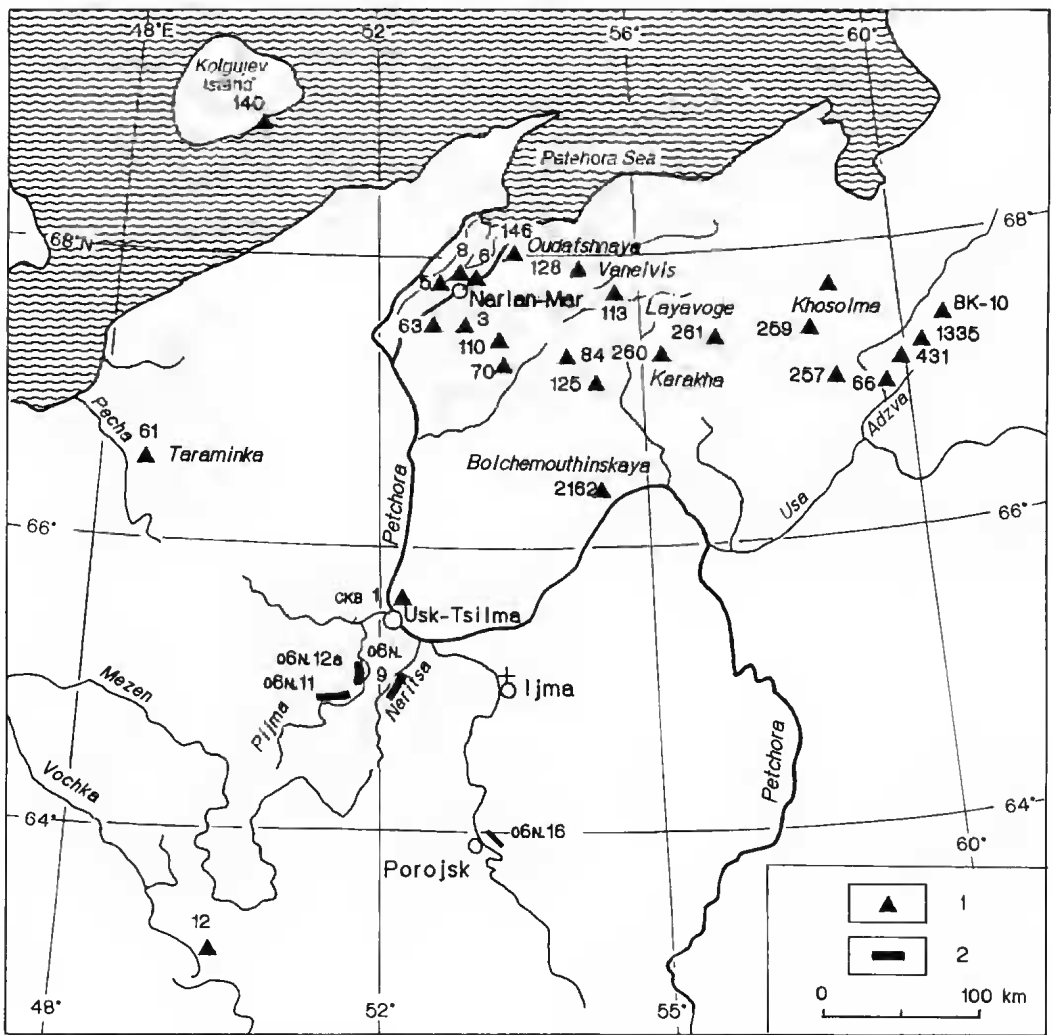


Fig. 3. — Location map of sites (drill holes -1- and outcrops -2-) reported by Kozlova (1994) in published investigations of Pechora (48°-60°E, 64°-69°N).

sub.n.sp. A number of forms from the Ukrainian Carpathians are described by Lozynyak (1969, 1975), and other forms from Azerbaidzhan are described in a series of papers by Aliev (1961a, b, 1965, 1969a, b) on Valanginian, Aptian, Albian and Cenomanian assemblages in which many of the radiolarians are calcitized.

Kozlova (1971) in her paper "About finding of radiolarians in the lower Kimmeridgian strata of the Timan-Urals region" reported the radiolarian assemblage from white marl strata of 10 cm thick with the ammonites *Amoeboceras kitchini* Salf, *Rusenia* cf. *rimem* Opp. The assemblage included seventeen species, where five species were new: *Stylosphaera* ? *asperalla* Kozlova n.sp., *Staurodietya retusa* Kozlova n.sp., *Hagiastrium crassum* Kozlova n.sp., *H. squama* Kozlova n.sp., *Spirema* ? *sphaerica* Kozlova n.sp. She emphasized that these newly discovered assemblages are similar to the Lower Cretaceous assemblages from Vjarka and Kama River Basins, previously described (Khudjaev 1931; Khabakov 1937).

A paper by Kozlova (1973) "New species from lower Kimmeridgian of the Timan-Urals region" gave the description of all new species listed in her previous paper (Kozlova 1971). Poorly-preserved Albian radiolarians from the Dnieper-Don Basin were reported by Gorbunov (1979).

Kozlova (1983) in her paper "Late Volgian radiolarians of USSR North" recognized three radiolarian assemblages: lower Kimmeridgian *Crucella crassa*, Volgian *Stichopilidium planocephala*, Berriasian *Hemicryptocapsa salymica* and described *S. planocephala* n.sp.

Kozlova (1994) in a paper entitled "Assemblages of Mesozoic radiolarians from the Timan-Pechora oil-bearing region" describes precise characteristics of four radiolarian assemblages: lower Kimmeridgian *Crucella crassa*, middle Volgian *Parvicingula papulata*, upper Volgian *Pseudocrocanium planocephala* and upper Berriasian-lower Valanginian *Hemicryptocapsa salymica*, which were partly described in her previous papers (Kozlova 1973, 1976). About twelve species were illustrated as new in this paper. Vishnevskaya (1993) in a paper "Jurassic and Cretaceous radiolarian biostratigraphy in the USSR" illustrated twelve species from Coniacian-Santonian strata from the Moscow district.

Bragina (1994) in her paper "Upper Cretaceous radiolarians and stratigraphy of Khotkovo Group, Moscow region" studied radiolarians in four sections and proposed two biostratigraphic units: Coniacian (?) - Campanian (*Archaeospongo-prunum bipartitum*-*Crucella irwini*) and Campanian (*Archaeospongo-prunum hueyi*-*A. salumi*). She counted more than 50% of Californian species among these Russian plate assemblages.

Vishnevskaya (1996) in a paper "Peri-Tethyan radiolarians and their implications" illustrated eighteen species from Albian-Santonian of the Moscow, Kaluga and Brjansk areas.

CONCLUSION

The improvement of a taxonomic system for Mesozoic radiolarians is hampered by a general lack of well-preserved specimens from well organized sequences which are needed to develop the basis for a reliable hypothesis of evolutionary links. This has represented an important factor in the approach chosen by some authors (e.g. Pessagno 1969a, b, 1971a, 1977b; Emson-Morin 1981, 1982; Kozur & Mostler 1972-1989) who produced a highly-split taxonomic hierarchy indicating all observed morphological characters. A highly-divided taxonomy is useful for the recognition of slight morphological variations which may eventually be comprehended as expression of paleoenvironmental conditions. This does not necessarily, however, advance the general aim of a taxonomy which considers phyletic relationships, and it often results in species which are too narrowly delimited to be broadly suitable for stratigraphic purposes. However, correlations are a primary phase in the move towards settling the succession of species on which a natural classification can be based. Fulfilment of these aims would allow a better appreciation of the paleobiodiversity of these organisms and provide a useful tool for measuring geological time.

Acknowledgments

This study was carried out during the Peri-Tethys Programmes (Project No. 94-40 and No. 95-18)

and in the GDR 88. It was financed by these programmes and by the URA 1761. We are also grateful to Dr. E. Urquhart (UCLondon, UK) who criticised and painstakingly helped to improve the manuscript as well as for M. Baconat (MNHN, Paris) who carefully checked the bibliographic references.

REFERENCES

- Adachi M. 1982. — Some considerations on the *Mirafissus baileyi* Assemblage in the Mino terrane, Central Japan. *News of Osaka Micropaleontologists, Special Volume, Osaka 5*: 211-225 [in Japanese with English abstract].
- Afanasjeva M. S. 1986. — Radiolarii semeistva Pylentonemidae [Radiolarians of the Family Pylentonemidae]. *Paleontologicheskii Zhurnal [Paleontological Journal]*, Moscow 3: 22-34.
- Aita Y. 1982. — Jurassic radiolarian biostratigraphy in Irazuyama district, Kochi Prefecture, Japan - A preliminary report, *News of Osaka Micropaleontologists, Special Volume, Osaka 5*: 255-270 [in Japanese with English abstract].
- 1985. — Jurassic Radiolarian Biostratigraphy of the Irazuyama Formation (Takano Section), Shikoku, Japan. *Scientific and Technical Reports of the Mining College, Akita 6*: 33-41 [in Japanese with English abstract].
- 1987. — Middle Jurassic to Lower Cretaceous Radiolarian Biostratigraphy of Shikoku with reference to Selected Sections in Lombardy Basin and Sicily. *Science Reports of Tohoku University, Sendai, Second (Geology) 58 (1)*: 1-91.
- Aita Y. & Okada H. 1986. — Radiolarians and calcareous nanofossils from the uppermost Jurassic and Lower Cretaceous strata of Japan and Tethyan regions. *Micropaleontology, New York 32 (2)*: 97-128.
- Aitchison J. C. 1988. — Radiolaria from the southern part of the New England Orogen, eastern Australia, in Kleeman J. D. (ed.), *New England Orogen. Tectonics and Metallogenesis, Armidale*: 50-60.
- Alcocer V. M. D. 1960. — Radiolarios del Cretacico inferior de la Formación Plateros, Distrito Minero de Fresnillo, Zacatecas. *Notas y Noticias*: 119.
- Aliiev Kh. Sh. 1961a. — Novye vidy Radiolyarii nizhnemelovykh otlozhenii. Severo-Vostochno Azerbaidzhana [New radiolarian species of the Lower Cretaceous deposits of northeastern Azerbaidzhan]. *Izvestiya Akademii Nauk Azerbaidzhanskoy SSR, Seriya Geologo-Geograficheskikh Nauk i Nefii*, n° 1: 51-65.
- 1961b. — Novye vidy Radiolyarii nizhnego mela severo-vostochnogo Azerbaidzhana [New radiolarian species of the Lower Cretaceous of northeastern Azerbaidzhan]. *Izvestiya Akademii Nauk Azerbaidzhanskoi*, n° 5: 63-72.
- 1965. — Radiolyarii nizhnemelovykh otlozhenii severo-vostochnogo Azerbaidzhana i ikh stratigraficheskoe znachenie [Radiolarians of the Lower Cretaceous deposits of northeastern Azerbaidzhan and their stratigraphic significance]. *Izdatel'stvo Akademii Nauk*: 1-124.
- 1969a. — Sistematischeskoe sootnoshenie neskol'kikh blizkikh rodov iz semeistva cyrtoidae [The systematic relation of some closely related genera of the family Cyrtoidae]. *Iskopaemye i Sovremennye Radiolyarii: Materialy vtorogo vsesoyuznogo seminara po radiolyariyam [Fossil and Recent Radiolarians: Materials of the Second All Union Seminar on Radiolarians]*, Izdatel'stvo Lvovskogo Universiteta (Lvov University) USSR: 73-77.
- 1969b. — Kharakter raspredeleniya radiolyarii v nizhnemelovykh otlozheniyakh yugo-vostochnogo Kavkaza (Azerbaidzhana) [The nature of the distribution of radiolarians in the Lower Cretaceous deposits of the southeastern Caucasus (Azerbaidzhan)]. *Iskopaemye i Sovremennye Radiolyarii: Materialy vtorogo vsesoyuznogo seminara po radiolyariyam [Fossil and Recent Radiolarians: Materials of the Second All Union Seminar on Radiolaria]*, Izdatel'stvo Lvovskogo Universiteta (Lvov University) Lvov, USSR pp. 45-61.
- Aliiev Kh. Sh. & Smirnova R. F. 1969. — Novye vidy radiolyarii otlozhenii albskogo yarusy (centralnykh raionov Russkoi platformy) [New radiolarian species from the deposits of the Albian stage in the central areas of the Russian platform]. *Iskopaemye i Sovremennye Radiolyarii: Materialy vtorogo vsesoyuznogo seminara po radiolyariyam [Fossil and Recent Radiolarians: Materials of the Second All Union Seminar on Radiolarians]*: 62-72.
- Amano K. 1980. — Geology of the Ou Backbone ranges in Miyagi and Yamagata Prefectures, Northeast Honshu, Japan. *Contributions from the Institute of Geology and Paleontology, Tohoku University, Tohoku 81*: 1-56 [in Japanese with English abstract].
- Amon E. O. 1985. — Radiolarians of the Kuznetsovskaja serie (Turonian) of the western part of the west siberian lowland. *EuroRad IV, Leningrad, October 15 to 19, 1984 Fourth International Meeting of Radiolarists organized by EuroRad - Radiolaria, Paris 9*: 43.
- 1988. — Cretaceous Radiolaria of the Urals, in Schmidt-Effing R. & Braun A. (eds), *First International Conference on Radiolaria (EURO-RAD V)*, 21 to 24 July 1988 (abstract), *Geologica and Palaeontologica, Marburg*: 6-7.
- 1995. — Short Upper Cretaceous biostratigraphy of the prapolar pre-Urals (Usa river basin): 109-137, in *New data on stratigraphy of Upper Paleozoic to Lower Cenozoic of the Urals*. Ekaterinburg.

- Amon E. A. & De Wever P. 1994. — Upper Cretaceous biostratigraphy of the borders of the Urals belt: western Siberian and eastern Volga-Urals basins: 229-262, in Roure (ed.), *Peri-Tethys Platforms*. Technip, Paris.
- Anderson R. O. 1983. — *Radiolaria*: 1-355, in Anderson R. O. (ed.), Springer Verlag, Berlin.
- Andrusov 1950. — Skameneliny karpatskykh Druhohr. I, Ransliny a Prvky [Les fossiles du Mésozoïque des Karpates. I, Plantes et Protozoaires]. *Prace Statneho Geologického Ustavu* 25: 1-164.
- Anonymous 1959. — Microfacies Italiane. *AGIP Mineraria*. Milan, 35 p.
- Aoki T. 1982. — Upper Jurassic to Lower Cretaceous Radiolarians from the Tsukimiyama and Tei Mélanges of the Northern Shimanto Belt in Kochi Prefecture, Shikoku. *News of Osaka Micropaleontologists*, Volume Special, Osaka, 5: 339-351 [in Japanese with English abstract].
- Aoki T. & Tashiro M. 1982. — A stratigraphical study of the Cretaceous Shimanto Belt [The "Doganaro" and Uwagumi Formations] at Uwagumi, Kagami-machi, Kami-gun, Kochi Prefecture, Shikoku. *Research Reports of Kochi University, Natural Science*, Kochi 31: 1-24.
- Aplin A. C., Bishop A. N., Clayton C. J., Kearsley A. T., Mossman J. R., Patience R. L., Rees A. W. G. & Rowland S. J. 1992. — A lamina-scale geochemical and sedimentological study of sediments from the Peru Margin (Site 680, ODP Leg 112), in Summerhayes C. P., Prell W. L. & Emeis K. C. (eds), Upwelling systems: Evolution Since the Early Miocene, *Geological Society, Special Publication* 64: 131-149.
- Averburg N.-V. & Kestner F. F. 1973. — Rasprostraneniye radiolyarii i foraminifer v nizhnei chasrianalozhno kumskogo gorizonta v severo-zapadnom Uzbekistane [Distribution of Radiolarians and Foraminifera in the Lower Part of the analogues of the Kumsk Horizon in Northwestern Uzbekistan], in Ancient Radiolarians of Middle Asia. *Kafedra Geologii i Paleontologii Tadzhikskii Gosudarstvennyi Universitet, Drevnie Radiolyarii Srednei Azii [Collection of Scientific articles]*, Dushanbe 3: 130-138.
- Ayala-Castaneres A. 1959. — Estudio de algunos microfósiles planctónicos de las calizas del Cretácico Superior de la República de Haití. *Paleontologica Mexicana* (Instituto Geología, Universidad Nacional Autónoma de México) n° 4: 1-41.
- Bailey E. B. & Mc Callien W. J. 1953. — Serpentine Lavas, the Ankara Melange and the Anatolian Thrust. *Transactions of the Royal Society, Edinburgh*, 2, 62, 11: 403-432.
- Barret T. J. 1982. — Stratigraphy and sedimentology of Jurassic bedded chert overlying ophiolites in the North Apennines, Italy. *Sedimentology*, Oxford, London 29: 353-373.
- Basov I. A. & Vishnevskaya V. S. 1995. — Evolution of the radiolarian and foraminiferal associations from NW Pacific at the Cretaceous/Paleocene and Paleocene/Eocene boundaries as indicator of oceanologic reconstructions, in *RFFI in Siberian Region*, Irkutsk, 1: 57-58.
- Basov V.-A., Lopatin B. G., Gramberg I. S., Dadjushevskaya A. I., Kobankov V. Y., Lazurkin V. M. & Patrakov D. K. 1979. — Lower Cretaceous lithostratigraphy near Galicia Bank. *Initial Reports of the Deep Sea Drilling Project, (U.S. Government Printing Office)*, Washington, 47, part 2: 683-717.
- Baumgartner P. O. 1980. — Late Jurassic Hagiastriidae and Paulibracchiidae (Radiolaria) from the Argolis Peninsula (Peloponnesus, Greece). *Micropaleontology*, New York 26 (3): 274-322.
- 1981. — Late Jurassic Hagiastriidae - a taxonomy based on internal skeletal elements, in Baumgartner P. O., Björklund K. R., Cauler J.-P., De Wever P., Kellogg D., Labracherie M., Nakaseko K., Nishimura A., Schaaf A., Schmidt-Effing R., Yao A. (eds), EURORAD II, 1980 - Second European Meeting of Radiolarian Paleontologists: Current Research on Cenozoic and Mesozoic radiolarians, *Eclogae Geologicae Helveticae*, Basel 74 (3): 1036-1040.
- 1983. — Summary of Middle Jurassic-Early Cretaceous Radiolarian biostratigraphy of Site 534 (Blake Bahamas Basin) and correlation to Tethys sections, in Sheridan R. E., Gradstein F. M. et al., *Initial Report of the Deep Sea Drilling Project, (U.S. Government Printing Office)*, Washington LXXVI: 569-571.
- 1984. — A Middle Jurassic-Early Cretaceous low-latitude radiolarian zonation based on Unitary Associations and age of Tethyan radiolarites. *Eclogae Geologicae Helveticae*, Basel 77 (3): 729-837.
- 1985. — Jurassic Sedimentary Evolution and Nappe Emplacement in the Argolis Peninsula (Peloponnesus, Greece). *Mémoires de la Société Helvétique des Sciences Naturelle. [Denkschriften der Schweizerischen Naturforschenden Gesellschaft]*, Basel 99: 1-111.
- 1987. — Age and genesis of Tethyan Jurassic Radiolarites. *Eclogae Geologicae Helveticae*, Basel 80 (3): 831-879.
- Baumgartner P. O. & Bernoulli D. 1976. — Stratigraphy and Radiolarian Fauna in a Late Jurassic-Early Cretaceous Section near Achladi (Evvoia, Eastern Greece). *Eclogae Geologicae Helveticae*, Basel 69 (3): 601-626.
- Baumgartner P. O., De Wever P. & Kocher R. N. 1980. — Correlation of Tethyan Late Jurassic-Early Cretaceous events. *Cahiers de Micropaleontologie*, Paris 2: 23-85.
- Beck C., Girard D. & De Wever P. 1984. — Le « Volcano-sédimentaire du Rio Guare » : un élément de la nappe ophiolitique de Loma de Hierro,

- Chaîne Caraïbe Vénézuélienne. *Comptes Rendus de l'Académie des Sciences*, Paris, II, 299, 7 : 337-342.
- Benson W. N. & Chapman F. 1938. — Note on the occurrence of radiolarian limestone among the older rocks of South-eastern Otago. *Transactions of the Royal Society of New Zealand*, Wellington 67 (4): 373-374.
- Bergounioux F. M. 1950. — Calcaires silicifiés du Causse du Larzac. *Compte Rendu Sommaire du Bulletin de la Société Géologique de France*, Paris, 5, 20 : 99-105.
- Bergstresser T. J. 1983. — Radiolaria from the Upper Cretaceous Pierre Shale, Colorado, Kansas, Wyoming. *Journal of Paleontology*, Tulsa, Oklahoma, 57, 5: 877-882.
- Beurrier M., Bourdillon de Grissac C., De Wever P. & Lescuyer J.-L. 1987. — Biostratigraphie des radiolarites associées aux volcanites ophiolitiques de la nappe de Samail (Sultanat d'Oman) : conséquences tectogénétiques. *Comptes Rendus de l'Académie des Sciences*, Paris, II, 304, 15: 907-910.
- Blake M. C. Jr & Murchey B. L. 1988. — A California model for the New England fold belt, in Kleeman J. D. (ed.), *New England Orogen, Tectonics and Metallogenesis*, *Armistide*: 20-31.
- Blendinger W. 1985. — Radiolarian limestones inter-fingering with loferites (Triassic, Dolomites, Italy). *Neues Jahrbuch für Geologie und Paläontologie, Monatshefte*, Stuttgart, H.4: 193-202.
- Blome C. D. 1983. — Upper Triassic Capnucho-sphaeridae and Capnodocinae (Radiolaria) from east-central Oregon. *Micropaleontology*, New York 29 (1): 11-49.
- 1984a. — Middle Jurassic (Callovian) Radiolaria from southern Alaska and eastern Oregon. *Micropaleontology*, New York 30 (4): 343-389.
- 1984b. — Upper Triassic Radiolaria and Radiolarian Zonation from Western North America. *Bulletins of American Paleontology*, Ithaca, New York, 85, 318: 5-88.
- 1987. — Paleogeographic significance of Lower Mesozoic Radiolarians from the Brooks Range, Alaska, in Tailleux I. L. & Weimer P. (eds), *Alaskan North Slope Geology, Society of Economic Paleontologists and Mineralogists, Pacific Section*, Tulsa, Oklahoma 1: 371-380.
- Blome C. D. & Irwin W. P. 1985. — Equivalent radiolarian ages from ophiolitic terranes of Cyprus and Oman. *Geology*, Boulder, 13, 6: 401-404.
- Blome C. D., Tippit P., Garrison R. E., Bernoulli D. & Smewing D. 1983. — Radiolarian biostratigraphy of Hawasina Complex, Northern Oman. *American Association of Petroleum Geologists, abstracts of Annual Convention, 17-20 April 1983 Dallas*, Boulder 67 (3): 425.
- Blome C. D., Jones D. L., Murchey B. L. & Liniecki M. 1986. — Geologic implications of Radiolarian-Bearing Paleozoic and Mesozoic rocks from the Blue Mountains Province, Eastern Oregon, in Vallier T. L., Brooks H. C. (eds), *Geology of the Blue Mountains Region of Oregon, Idaho, and Washington. Geologic implications of Paleozoic and Mesozoic Paleontology and Biostratigraphy, Blue Mountains Province, Oregon and Idaho, U.S. Geological Survey Professional Paper 1435, U.S. Government Printing Office, Washington: 79-93.*
- Blome C. D., Moore P. R., Simes J. E. & Watters W. A. 1987. — Late Triassic Radiolaria from Phosphatic concretions in the Torlesse Terrane, Kipiti Island, Wellington. *New Zealand Geological Survey Record*, Wellington 18: 103-109.
- Blome C. D., Reed K. M. & Tailleux I. L. 1989. — Radiolarian biostratigraphy of the Otuk Formation in and near the National Petroleum reserve in Alaska. *U.S. Geological Survey Professional Paper 1399*, Reston: 725-775.
- Bogdanov N. A., Chekhovich V. D., Sukhov A. N. & Vishnevskaya V. S. 1982. — Tectonic of the Olutor zone, Volume V. *Ocherki Tektoniki Koriakskogo najorja Nayka*, M: 189-217.
- Bogdanov Y. A., Gurvich Y. G. & Lisitsyn A. P. 1980. — Model for accumulation of calcium carbonate in bottom sediments of the Pacific Ocean. *Geochemistry international* 17 (2):125-131.
- Bolin E. J. 1956. — Upper Cretaceous Foraminifera, Ostracoda and Radiolaria from Minnesota. *Journal of Paleontology*, 30, No. 2: 278-298.
- Bonet E. & Trejo M. 1956. — Fauna de Radiolarios en las fosforitas jurasicas de la Sierra Madre de Santa Rosa, Zacatecas. *XX JGC, Mexico*, Resumen: 173.
- Borisenko N. N. 1958. — Radiolyarii paleotsena zapadnoi Kubani [Paleocene Radiolaria of Western Kuban]. *Trudy Vsesoyuznyi Neftegazovyi Nauchno-Issledovalekii Institui (VNII), Krasnodarskii Filial*, n° 17: 81-100.
- 1960. — Novye radiolyarii iz paleotsenovykh otlozhenii kubani [New radiolarians from the Paleocene deposits of the Kuban]. *Trudy Vsesoyuznyi Neftegazovyi Nauchno-Issledovalekii Institui (VNII), Krasnodarskii Filial*, n° 3: 199-207.
- Bourdillon de Grissac C., De Wever P. & Bechenec F. 1987. — Nouvelles données biostratigraphiques des montagnes d'Oman, du Permien au Crétacé, à partir des Radiolaires et des Foraminifères. Communication orale. Réunion spécialisée des 15 et 16 Juin 1987 : Géologie de l'Oman. *Bulletin de la Société Géologique de France, Comptes Rendus sommaires, Activité 1987, supplément au bulletin 1988*, Paris, IV, 2 : 31.
- Bourgeois J., Azema J., Tournon J., Bellon H., Calle B., Parra E., Toussaint J. F., Glaçon G., Feinberg H., De Wever P. & Origlia I. 1982 — Âges et structures des complexes basiques et ultrabasiques de la façade pacifique entre 3°N et 12°N (Colombie, Panama et Costa Rica). *Bulletin de la Société géologique de France*, Paris, (7), XXIV, 3: 545-554.
- Bouysse P., Schmid-Effing R. & Westercamp D.

1983. — La Desirade Island (Lesser Antilles) revisited: Lower Cretaceous radiolarian cherts and arguments against an ophiolitic origin for the basal complex. *Geology*, Boulder 11: 244-247.
- Boyanov L. & Lipman R. Kh. 1973. — O nizhnemelovom vozraste nizkokristallicheskogo metamorficheskogo kompleksa Vostochnykh Rodop [On the Lower Cretaceous Age of the Low Crystalline Metamorphic Complex of the Eastern Rodops]. *Doklady Bolgarskoy Akademii Nauk*, Sofia, 26, 9: 1225-1226.
- Bragin N. 1985. — Stratigraphy on the triassic deposits of the Sakhalin on the basis of Radiolarians. *EuroRAD IV, Leningrad October 15 to 19, 1984 - Fourth International Meeting of Radiolarists organized by EuroRAD - Radiolaria*, Paris 9: 49.
- 1986. — Triassic biostratigraphy of the south Sakhalin sequences. *Academy of Sciences Reports, geological Serie*, No. 4: 61-75.
- 1991a. — Katnian radiolarian assemblage from volcano-siliceous Formations of the Ekonyay tectonic zone, Koryak upland. *Academy of Sciences Reports, geological Serie*, No. 6: 79-86.
- 1991b. — *Radiolarians and Lower Mesozoic Formations from USSR Far East*. Nauka, Moscow, 125 p. [in Russian].
- 1994. — Boreal Triassic Radiolarian succession of the Omolon massif (NE Siberia). Abstracts of *INTERRAD VII*, Osaka: 25.
- Bragin N. & Bragina L. 1995. — Late Albian to Cenomanian Radiolaria from deposits of Episkopi Formation (SW Cyprus). Abstracts of *5th Zonen-shain Conference on Plate Tectonics*, Moscow, Kiel: 197.
- Bragina L. 1994. — Radiolarians and stratigraphy of the Upper Cretaceous deposits of Khotkovian Series of the Moscow Region. *Bulletin MOIP, geological Branch*, 69, No.2: 91-100 [in Russian].
- Brönnimann P. & Rigassi D. 1963. — Contribution to the geology and paleontology of the area of the City of La Habana, Cuba, and its surroundings. *Eclogae geologicae Helveticae* 56 (1): 193-480.
- Brouwer H. A. 1921. — *Geologische onderzoekingen op het eiland Rotti. Boekhandel en drukkerij voorben*. E.-J. Brill, Leiden, 88 p.
- Campbell A. S. 1954. — Radiolaria, in Moore R.-C. (ed.), *Treatise on Invertebrate Paleontology*, Part D, Protista 3, *Geological Society of America and University of Kansas Press*, Lawrence, Kansas, USA: D11-D195.
- Campbell A. S. & Clark B. L. 1944. — Radiolaria from Upper Cretaceous of Middle California. *Geological Society of America*, Special paper, Boulder 57: i-viii & 1-61.
- Campbell A. S. & Moore R.-C. 1954. — Radiolaria. Part D: Protista 3, in Moore R.-C. (ed.), *Treatise on Invertebrate Paleontology*, *Geological Society of America, University of Kansas Press*, Lawrence D: D1-D163.
- Carayon V., De Wever P. & Raoult J. F. 1984. — Étude des blocs calcaires contenus dans les séries Franciscaines du SW de l'Oregon (USA) : conséquences sur l'âge des mélanges. *Comptes Rendus de l'Académie des Sciences*, Paris, II, 298, 16: 709-714.
- Carr R. M. & Fyfe W. S. 1958). — Some observations on the crystallisation of amorphous silica. *American Mineralogist* 43: 908-916.
- Carter E. S. 1985. — *Early and Middle Jurassic Radiolarian Biostratigraphy, Queen Charlotte Islands*, B. C. Thèse Master's Sc., University of British Columbia, Vancouver (inédit): 1-291.
- 1988. — Upper Norian (Triassic) Radiolaria from the Queen Charlotte Islands, British Columbia, Canada, in Schmidt-Effling R. & Braun A. (ed.), *First International Conference on Radiolaria (EURORAD V)*, 21 to 24 July 1988, (abstract), *Geological and Palaeontologica*, Marburg: 10.
- 1990. — New biostratigraphic elements for dating upper Norian strata from the Sandilands Formation, Queen Charlotte Island, British Columbia, Canada. *Marine Micropaleontology* 15 (3-4): 313-328.
- 1992. — A new phylogenetic lineage (Radiolaria) from the uppermost Triassic of the Queen Charlotte Islands, British Columbia; Fifth North American Paleontological Convention, Abstracts & Program, Chicago. *The Paleontological Society*, Special Publication 6: 53.
- 1993. — Biochronology and paleontology of uppermost triassic (Rhaetian) Radiolarians, Queen Charlotte Islands, British Columbia, Canada. *Mémoires de Géologie*, Lausanne, volume 11, 175 p.
- 1994. — Evolutionary trends in latest Norian through Hettangian radiolarians from the Queen Charlotte Islands, British Columbia. *Geobios, Mémoire Spécial*. Lyon 17: 111-119.
- Carter E. S., Cameton B. E. B. & Smith P. L. 1988. — Lower and Middle Jurassic radiolarian biostratigraphy and systematic paleontology, Queen Charlotte Islands, British Columbia. *Geological Survey of Canada Bulletin*, 386: 1-109.
- Carter E. S., Orchard M. J. & Tozer E. T. 1989. — Integrated ammonoid-conodont-radiolarian biostratigraphy, Late triassic Kunga Group, Queen Charlotte Islands, British Columbia. *Current Research, Geological Survey of Canada*, Paper 89-1H: 23-30.
- Cauter J.-P., Vénec-Peyré M.-T., Vergnaud-Grazzini C. & Nigrini C. 1992. — Variation of South Somalian upwelling during the last 160 Ka: radiolarian and foraminifera records in core MD 85674, in Summerhayes C. P., Prell W. L. & Emeis K. C. (eds), *Upwelling systems: Evolution Since the Early Miocene*. *Geological Society, Special Publication* 64: 379-389.
- Cayeux L. 1891. — De l'existence de nombreux Radiolaires dans le Jurassique et dans l'Eocène du

- Nord de la France - Origine probable de la silice et de la gaize et des tuffeaux éocènes. *Extrait des Annales de la Société Géologique du Nord*, Lille XIX : 309-315.
- 1896. — De l'existence de nombreux radiolaires dans le Tithonique supérieur de l'Ardèche. *Comptes Rendus de l'Académie des Sciences*, Paris, 122, 6 : 342-343.
- 1897. — Contribution à l'étude micrographique des terrains sédimentaires. 1 - Etude de quelques dépôts siliceux secondaires et tertiaires du Bassin de Paris et de la Belgique ; 2 - Craie du Bassin de Paris. *Mémoires de la Société géologique du Nord*, Lille, 4, 2, 591 p.
- Cheng Y.-N. 1989. — Upper Paleozoic and Lower Mesozoic Radiolarian assemblages from the Busuanga Islands, North Palawan Block, Philippines. *Bulletin of the National Museum of Natural Science*, Taiwan 1: 129-175, 11 pl.
- Ciarapica G. & Zaninetti L. 1982. — Faune à Radiolaires dans la séquence triasique/liasique de Grotta Arpaia, Portovenere (La Spezia), Apennin septentrional. *Revue de Paléobiologie*, Genève, 1, 2 : 165-179.
- Cita M. B. 1965 — Jurassic Cretaceous and Tertiary microfacies from the Southern Alps (Northern Italy). *International Sedimentary Petrographical Series*, vol. 8, 99 p.
- Cita M. B., Nigrini C. A. & Gartner S. 1970. — Biostratigraphy, Leg 2, in Peterson M. N., Edgar N. T. et al. *Initial Reports of the Deep Sea Drilling Project*, (U.S. Government Printing Office), Washington 2: 391-411.
- Colchen M., Reuber I., Bassoulet H. J. P., Bellier J. P., Blondeau A., Lys M. & De Wever P. 1987. — Données biostratigraphiques sur les mélanges ophiolitiques du Zaskar, Himalaya du Ladakh. *Comptes Rendus de l'Académie des Sciences*, Paris, II, 305 : 403-406.
- Colom 1954. — La sedimentación pelagica de la Isla de Maio (Archipelago de Cabo Verde) y sus equivalentes mediterraneos (Malm-Neocomense). *Boletín de la Real Sociedad española de historia natural. Hernandez-Pacheco memorial volume*: 179-192.
- Conti M. 1986. — New data on the biostratigraphy of the Tuscan cherts at Monte Cetona (Southern Tuscany, Italy). in De Wever P. (ed.), Euro-rad IV. *Marine Micropaleontology*, Amsterdam 11 (1-3): 107-112.
- Conti M. & Marcucci M. 1986. — The onset of radiolarian deposition in the ophiolite sequences of the Northern Apennines, in De Wever P. (ed.), Euro-rad IV, *Marine Micropaleontology*, Amsterdam 11 (1-3): 129-138.
- Conti M. & Passerini M. 1988. — Radiolarian association in the Monte Alpe Cherts at Ponte di Lagoscuro, Val Graveglia (Eastern Liguria, Italy), in Schmidt-Effing R. & Braun A. (eds), First International Conference on Radiolaria, (EURO-RAD V), 21 to 24 July 1988 (abstract), *Geologica and Palaeontologica*, Marburg: 11.
- Conti M., Marcucci M. & Passerini P. 1985. — Radiolarian cherts and ophiolites in the Northern Apennine and Corsica: Age, Correlations and tectonic frame of siliceous deposition. *Ofioliti*, Florence 10 (2-3): 203-224.
- Conti M., Marcucci M. & Zanzucchi G. 1988. — Radiolarian dating of the Mt. Alpe Cherts at Costa Scandella, Mt. Penna - Mt. Aiona Group, Ligurian Apennines. *Ofioliti*, Bologna 13 (1): 81-84.
- Coomaraswamy A. K. 1902. — Occurrence of radiolaria in Gondwana Beds near Madras. *Geological Magazine*, IV: 305-307.
- Cordey F. 1984. — Radiolaires du Jurassique moyen de la série du Pinde-Olanos en Grèce continentale et des Montagnes Centrales Hongroises : taxonomie, stratigraphie. D.E.A. de l'Université Pierre & Marie Curie-PARIS VI, Paris (inédit): 42.
- Cordey F. & De Wever P. 1988. — Radiolarians from Southern Canadian Cordillera, in Schmidt-Effing R. & Braun A. (eds), First International Conference on Radiolaria (EURO-RAD V), 21 to 24 July 1988 (abstract), *Geologica and Palaeontologica*, Marburg: 12.
- Cordey F., De Wever P., Mortimer N. & Monger J. W. H. 1987. — Découverte de Radiolaires jurassiques dans la série de Cache Creek (Colombie britannique, Canada) : mise en évidence d'un vaste domaine de terrains océaniques permio-jurassiques dans les Cordillères ouest-américaines. *Comptes Rendus de l'Académie des Sciences*, Paris, II, 305: 601-603.
- Cordey F., De Wever P., Dumitrica P., Danelian T., Kito N. & Vrielynck B. 1988. — Description of some new Middle Triassic Radiolarians from the Camp Cove Formation, Southern British Columbia, Canada. *Revue de Micropaléontologie*, Paris, 31 (1) : 30-37.
- Cordey F., Cordey S. P. & Orchard M. J. 1991. — New Biostratigraphic data for the northern Cache Creek Terrane, Teslin map area, southern Yukon. *Geological Survey of Canada paper*, 91-1E: 67-76.
- Cordey F., Mortimer N., De Wever P. & Monger J. W. H. 1987. — Significance of Jurassic radiolarians from the Cache Creek terrane, British Columbia. *Geology*, Boulder, 15, 12: 1151-1154.
- Corti B. 1896. — Sulla fauna a radiolarie dei noduli siliciosi della majolica di Campora presso Como. *Rendiconti Reale Istituto lombardo di scienze e lettere*, Milano, ser. 2, 29: 990-994.
- Crandell D. R. 1952. — Origin of Crow Creek member of Pierre shale in central South Dakota. *Bulletin of the American Association of petroleum geologists*, Tulsa 36 (9): 1754-1765.
- Crespin J. 1946. — A lower Cretaceous fauna in the Northwest Basin of Western Australia. *Journal of Paleontology*, vol. 20, n° 5: 505-509.
- 1958. — Microfossils in Australian and New

- Guinea stratigraphy. *Journal and Proceedings of the Royal Society of New South Wales*, Sidney, 92, part 4: 133-147.
- 1960. — Radiolaria in the Lower Cretaceous rocks of Australia. *Report of the International Geological Congress, XXI Session*, Norden: 27-33.
- Dacque E. 1933. — Wirbellose des Jura. *Leitfossilien*, Lfg. 7, pt. 1, 237 p.
- Danelian T. 1989. — Radiolaires jurassiques de la zone ionienne (Épire, Grèce). *Paléontologie - Stratigraphie - Implications paléogéographiques*. Thèse de Doctorat de l'Université Paris VI: 89-25, Mémoire des Sciences de la Terre Université P. et M. Curie, Paris: 1-246, 10 pl.
- Danelian T. & De Wever P. 1988. — Jurassic Radiolaria from the Ionian Zone of NW Greece, in Schmidt-Effing R. & Braun A. (eds), First International Conference on Radiolaria (EURO-RAD V), 21 to 24 July 1988 (abstract), *Geologica and Palaeontologica*, Marburg: 12.
- Danelian T., De Wever P. & Vrielynck B. 1986. — Datations nouvelles fondées sur les faunes de Radiolaires de la série jurassique des Schistes à Posidonies (zone ionienne, Épire, Grèce). *Revue de Paléobiologie*, Genève 5 (1): 37-41.
- Davis A. G. 1950. — The Radiolaria of the Hawasina Series of Oman. *Proceedings of the Geologists' Association*, London 61 (3): 206-217.
- Davis E. F. 1918. — The radiolarian rocks of the Franciscan Group. *University of California Publications, Bulletin of the Department of Geology*, 11: 235-432.
- De Lapparent J. 1925. — Les galets de "Radiolarites" des alluvions du Rhin. *Compte rendu Sommaire des Sciences de la Société Géologique de France*, 1925, n° 5: 67-68.
- Decelles P.-G. & Gutschick R. C. 1983. — Mississippian wood-grained chert and its significance in the western interior United States. *Journal of Sedimentary Petrology*, Tulsa, Oklahoma 53 (4): 1175-1191.
- Deecke W. 1895. — Die Mesozoischen Formationen der Provinz Pommern. *Mitteilungen des Naturwissenschaftlichen Vereins für Neuvorpommern und Rugen in Greifswald*, Jahrg 26 1894: 1-115.
- Deflandre G. 1953. — Radiolaires fossiles, in *Traité de Zoologie* 1, 2: 389-436. Grassé, Masson, Paris.
- 1960. — À propos du développement des recherches sur les Radiolaires fossiles. *Revue de Micropaléontologie*, Paris 2 (4): 212-218.
- 1964. — Sur le sens du développement, centrifuge ou centripète, des éléments de la coque des Radiolaires Sphaerellaires. *Comptes Rendus de l'Académie des Sciences*, Paris, 259, 12: 2117-2119.
- Deflandre G. & Deflandre-Rigaud M. 1958. — Données paléontologiques sur l'ontogénèse de la coque des Radiolaires Sphaerellaires. Conséquences taxinomiques. *Comptes Rendus de l'Académie des Sciences*, Paris 246: 968-970.
- Deflandre-Rigaud M. 1969. — Remarques sur la nomenclature des Radiolaires. I. Haeckel 1887 et le « Challenger ». *Bulletin du Muséum national d'Histoire naturelle*, Paris, 2, 40, 5: 1071-1092.
- Devos I. 1983. — *Radiolaires du Jurassique supérieur-Crétacé inférieur: Taxonomie et révision stratigraphique (Zone du Pinde-Olonos, Grèce; Zone de Sciaeca, Italie; Complexe de Nicoya, Costa Rica et forages du DSDP)*. Thèse de l'Université de Paris 328: 83-53.
- De Wever P. 1980. — A new technique for picking and mounting radiolarians for scanning electron microscopy. *Micropaleontology*, New York 26 (1): 81-83.
- 1981a. — Hagiastriidae, Patulibracchiidae et Spongodiscidae (Radiolaires polycystines) du Lias de Turquie. *Revue de Micropaléontologie*, Paris 24 (1): 27-50.
- 1981b. — Parasaturnalidae, Pantanellidae et Sponguridae (Radiolaires polycystines) du Lias de Turquie. *Revue de Micropaléontologie*, Paris 24 (3): 138-156.
- 1981c. — Une nouvelle sous-famille: les Poulpinae, et quatre nouvelles espèces de Saitoum, Radiolaires mésozoïques téthysiens. *Géobios*, Lyon, 14, 1: 5-15.
- 1981d. — Spyrids, Artostrobiids, and Cretaceous radiolarians from the Western Pacific, Deep Sea Drilling Project, Leg 61, in Larson R. L. & Schlanger S. O. et al., *Initial Reports of the Deep Sea Drilling Project*, (U.S. Government Printing Office), Washington LXI: 507-520.
- 1981e. — Mesozoic Radiolarian biostratigraphy, in Baumgartner P. O., Björklund K. R., Cautlet J.-P., De Wever P., Kellogg D., Labracherie M., Nakascko K., Nishimura A., Schaaf A., Schmidt-Effing R., Yao A., EURORAD II, 1980 Second European Meeting of Radiolarian Paleontologists: Current research on Cenozoic and Mesozoic radiolarians. *Eclogae Geologicae Helvetiae*, Basel 74 (3): 1044.
- 1981f. — The Poulpinae, spyrid-like forms of evolved Pylentonemidae, in Baumgartner P. O., Björklund K. R., Cautlet J.-P., De Wever P., Kellogg D., Labracherie M., Nakascko K., Nishimura A., Schaaf A., Schmidt-Effing R., Yao A., EURORAD II, 1980 - Second European Meeting of Radiolarian Paleontologists: Current research on Cenozoic and Mesozoic radiolarians, *Eclogae Geologicae Helvetiae*, Basel 74 (3): 1034-1036.
- 1982a. — Nassellaria (radiolaires polycystines) du Lias de Turquie. *Revue de Micropaléontologie*, Paris 24 (4): 189-232.
- 1982b. — Radiolaires du Trias et du Lias de la Tethys (Systématique, Stratigraphie). *Mémoires de la Société Géologique du Nord, Publication*, Lille, 7, 599 p.
- 1983. — Some evolutionary aspects of the

- Hagiasridae. *Euro-rad III, Bergen July 19 to 24, 1982 - Third International Meeting of Radiolarists organized by Euro-rad - Radiolaria - Contributions*, Paris 7: 50-59.
- 1984a. — Triassic radiolarians from the Darno area (Hungary). *Acta Geologica Hungarica, Akademiai Kiado*, Budapest 27 (3-4): 295-306.
- 1984b. — Révision des Radiolaires mésozoïques de type Saturnalide. Proposition d'une nouvelle classification. *Revue de Micropaléontologie*, Paris 27 (1): 10-19.
- 1984c. — Validation of the genus *Pobum* (Liassic radiolarian) from Turkey. *Revue de Micropaléontologie*, Paris 27 (1): 20.
- 1986. — Introduction to EURORAD IV, Fourth International Meeting of Radiolarists, Leningrad. *Marine Micropaleontology*, Special Issue, Amsterdam 11 (1-3): 1-3.
- 1987. — Radiolarites rubanées et variations de l'orbite terrestre. *Bulletin de la Société Géologique de France*, Paris, 3, 3, 4: 957-960.
- 1994. — Radiolarians and Radiolarites. « Le point sur ». *Comptes Rendus de l'Académie des Sciences*, Paris, II, 319: 513-526.
- De Wever P. & Baudin F. 1996. — Paleogeography of radiolarite and organic-rich deposits in Mesozoic Tethys. *Geologische Rundschau*, Stuttgart 85: 310-326
- De Wever P. & Bourdillon de Grissac C. 1988. — New Biostratigraphic Data in Oman Mountains (from Permian to Cretaceous) from radiolarians and Foraminifera (preliminary abstract), in Schmidt-Effing R. & Braun A. (eds), First International Conference on Radiolaria, (EURO-RAD V), 21 to 24 July 1988 (abstract), *Geologica and Palaeontologica*, Marburg: 14.
- De Wever P. & Caby R. 1981. — Datation de la base des schistes lustrés postpropholithiques par des radiolaires (Oxfordien supérieur-Kimmeridgien moyen) dans les Alpes Cotiennes (Saint Vétan, France). *Comptes Rendus de l'Académie des Sciences*, Paris, II, 292: 467-472.
- De Wever P. & Cordey F. 1984. — Direct datings on the base of Radiolarites from the Pindos-Olonos zone (Greece) by Radiolarians. *Euro-rad IV, Leningrad October 15 to 19, 1984 - Fourth International Meeting of Radiolarists organized by Euro-rad - Radiolaria*, Paris 9: 54.
- 1986. — Datation par les Radiolaires de la Formation des Radiolarites s.s. de la série du Pinde-Olonos (Grèce): Bajocian (?) - Tithonique [Radiolarian dating of the Radiolarite Formation s.s. of the Pinde-Olonos zone (Greece): Bajocian(?) - Tithonian], in De Wever P. (ed.), *Euro-rad IV, Marine Micropaleontology*, Special Issue, Amsterdam 11 (1-3): 113-127.
- De Wever P. & Dereourt J. 1985. — Les radiolaires triassico-jurassiques marqueurs stratigraphiques et paléogéographiques dans les chaînes alpines périméditerranéennes: une revue. *Bulletin de la Société géologique de France*, Paris, 8, 1, 5: 653-662.
- De Wever P. & Miconnet P. 1985. — Datations directes des radiolarites du Bassin du Lagonegro (Lucanie, Italie méridionale). Implications et conséquences. *Revista Espanola de Micropaleontologia*, Madrid, XVII 3: 373-402.
- De Wever P. & Origlia I. 1983. — Bases for a new classification of Saturnalid-Type forms. *Euro-rad III, Bergen July 19 to 24, 1982 - Third International Meeting of Radiolarists organized by Euro-rad - Radiolaria - Contributions*, Paris 7: 60-66.
- 1984. — A classification of Saturnalid-Type Forms based on symmetry, in Petrushevskaya M. G. & Stepanjants S. D. (eds), Morphology, Ecology and Evolution of Radiolarians [Morfologii, ekologii i evoloutsii Radiolaryi], *Proceedings of the Fourth Euro-rad Conference, 15-19 October, Academy of Science, Akademyia NAUK SSSR, Zoologicheskii Institut*, Leningrad: 103-113 [in English].
- De Wever P. & Origlia-Devos I. 1982a. — Datations nouvelles par les radiolaires de la série des Radiolarites s.l. du Pinde-Olonos (Grèce). *Comptes Rendus de l'Académie des Sciences*, Paris, II, 294: 399-404.
- 1982b. — Datation par les Radiolaires des niveaux siliceux du Lias de la série du Pinde-Olonos (Formation de Drimos, Péloponnèse et Grèce continentale). *Comptes Rendus de l'Académie des Sciences*, Paris, II, 294: 1191-1198.
- De Wever P. & Thiebault F. 1981. — Les Radiolaires d'âge Jurassique supérieur à Crétacé supérieur dans les Radiolarites s.l. du Pinde-Olonos (Presqu'île de Koroni, Péloponnèse méridionale, Grèce). *Géobios*, Lyon, 14, 5: 577-609.
- De Wever P., Sanfilippo A., Riedel W. R. & Gruber B. 1979. — Triassic radiolarians from Greece, Sicily, and Turkey. *Micropaleontology*, New York, 25 (1): 75-110.
- De Wever P., Azema J., Tournon J. & Desmet A. 1985a. — Découverte de matériel océanique du Lias-Dogger inférieur dans la péninsule de Santa-Elena (Costa Rica, Amérique centrale). *Comptes Rendus de l'Académie des Sciences*, Paris, II, 300, 15: 759-764.
- De Wever P., Duec G. & El Kadiri Kh. 1985b. — Les séries stratigraphiques des klipps de Chrafate (Rif septentrional, Maroc) témoins d'une marge continentale subsidente au cours du Jurassique-Crétacé. *Bulletin de la Société géologique de France*, Paris, (8), 1, 3: 363-379.
- De Wever P., Duec G., Azema J., Devos I., Geysant J. & Manivir H. 1985c. — Stratigraphy of the upper Jurassic-lower Cretaceous of Santa Anna (Sicily). *Euro-rad IV, Leningrad October 15 to 19, 1984 - Fourth International Meeting of Radiolarists organized by Euro-rad - Radiolaria*, Paris 9: 55.
- De Wever P., Ricou L. E. & Fourcade E. 1986a. — La

- fin brutale de l'optimum radiolaritique au Jurassique terminal : l'effet de la circulation océanique. *Comptes Rendus de l'Académie des Sciences*, Paris, II, 302, 9 : 665-670.
- De Wever P., Geysant J. R., Azema J., Devos I., Duce G., Manivit H. & Vrielynck B. 1986b. — La coupe de Santa Anna (zone de Sciacca, Sicile) : une synthèse biostratigraphique des apports des macro-, micro- et nanofossiles du Jurassique supérieur et Crétacé inférieur. *Revue de Micropaléontologie*, Paris 29 (3) : 141-186.
- De Wever P., Baumgartner P. O. & Polino R. 1987a. — Précision sur les datations de la base des Schistes Lustrés post-ophiolitiques dans les Alpes Cottiennes. *Comptes Rendus de l'Académie des Sciences*, Paris, II, 305 : 487-491.
- De Wever P., Danielian T., Durand-Delga M., Cordey F. & Kito N. 1987b. — Datations des radiolarites post-ophiolitiques de Corse alpine à l'aide des Radiolaires. *Comptes Rendus de l'Académie des Sciences*, Paris, II, 305 : 893-900.
- De Wever P., Bourdillon de Grissac C. & Bechenec F. 1988a. — Permian age from radiolarites of the Hawasina nappes, Oman Mountains. *Geology*, Boulder 16: 912-914.
- 1988b. — Radiolarian biostratigraphic data (Permian to Cretaceous) from the Hawasina Complex (Oman Mountains). *Journal of the Geological Society*, London, in press.
- De Wever P., Bourdillon de Grissac C. & Beurrier M. 1988c. — Radiolaires sénoniens de la Nappe de Samail (Oman). *Revue de Micropaléontologie*, Paris 31 (3) : 166-177.
- De Wever P., Azema J. & Fourcade E. 1994. — Radiolaires radiolarites : production primaire, diagenèse et paléogéographie. *Bulletin de la Société Elf*, Pau 18 (1) : 315-379.
- De Wever P., Bourgois J., Caulet J.-P., Fourtanier E., Barron J. & Dumitrica P. 1995. — Stratigraphic significance of siliceous microfossils collected during *Nautipere* dives (off Peru, 5°-6°S). *Marine Micropaleontology*, Amsterdam 24: 287-305.
- De Wever P., Baudin F., Azema J. & Fourcade E. 1995. — Radiolarians & Tethyan Radiolarites from primary production, to their paleogeography, 267-318, in Nairn A. et al., *The Ocean Basins and Margins*, vol. 8, *Tethys Ocean*. Plenum Press, New York.
- Düster-Haass L., Meyers P. A. & Rothe P. 1992. — The Bengtela Current and associated upwelling on the southwest African Margin: a synthesis of the Neogene-Quaternary sedimentary record at DSDP sites 362 and 532, in Summerhayes C. P., Prell W. L. & Emeis K. C. (eds), *Upwelling systems: Evolution Since the Early Miocene*, *Geological Society, Special Publication* 64: 331-342.
- Dinkelmann M.-G. 1973. — Radiolarian stratigraphy: Leg 16, Deep Sea Drilling Project, in van Andel T. H., Heath G. R. et al., *Initial Reports of the Deep Sea Drilling Project*, (U.S. Government Printing Office), Washington XVI: 747-813.
- Doderline L. 1887. — Phylogenetische Betrachtungen. *Biologisches Zentralblatt*, Leipzig, 7, 13: 394-402.
- Donofrio D. A. von & Mostler H. 1978. — Zur Verbreitung der Saurulanidae (Radiolaria) im Mesozoikum der Nördlichen Kalkalpen und Südalpen. *Geologisch-Paläontologische Mitteilungen*, Innsbruck, 7, 5: 1-55.
- Downie C. 1956. — Microplankton from the Kimeridge Clay. *The Quarterly Journal of the Society of London*, London, 112, 4: 413-434.
- Dumitrica P. 1970. — Cryptothralic and cryptothralic Nassellaria in some Mesozoic deposits of Romania. *Revue Roumaine de Géologie, de Géophysique et de Géographie, série Géologie*, Bucarest 14 : 45-124.
- 1973. — Cretaceous and Quaternary Radiolaria in deep sea sediments from the northeast Atlantic Ocean and Mediterranean Sea, in Ryan W. B. F., Hsu K. J. et al., *Initial Reports of the Deep Sea Drilling Project*, (U.S. Government Printing Office), Washington, 13, Part 2: 829-901.
- 1975. — Cenomanian Radiolaria at Podul Cimbovitei. Micropaleontological guide to the Mesozoic and Tertiary of the Romanian Carpathians. Excursion B, in *14th European Micropaleontological Colloquium, Romania, Institute of Geology and Geophysics*, Bucharest: 87-89.
- 1978a. — Family Epringiidae n.fam., extinct Nassellaria (Radiolaria) with sagittal Ring. *Dari De Seama ale Sedintelor*, Institutul de Geologie si Geofizica (3), Bucharest, LXIV, 3: 27-38.
- 1978b. — Triassic Palaeoscenediidae and Entactiniidae from the vicentinian Alps (Italy) and eastern Carpathians (Romania). *Dari De Seama ale Sedintelor - Institutul de Geologie si Geofizica - Paleontologie*, Bucuresti, LXIV, 3: 39-54.
- 1979. — Clasa Actinipoda: 9-35, in Neagu Th. (ed.), *Micropaleontologie*, Technica edition, Bucarest.
- 1982a. — Foremanellinidae, a new Family of Triassic Radiolaria. *Dari Seama Institutul de Geologie si Geofizica*, Bucharest 67: 75-82.
- 1982b. — Middle triassic spicular Radiolaria, *Revista Espanola de Micropaleontologia*, Madrid XIV: 401-428.
- 1982c. — Triassic Oertlisponginae (Radiolaria) from Eastern Carpathians and Southern Alps. *Dari Seama Sedintelor*, Institutul de Geologie si Geofizica - Paleontologie, Bucarest, LXVII, 3: 57-74.
- 1983a. — Evolution of Mesozoic and Cenozoic Centroctubidae (Radiolaria). *Revue de Micropaléontologie*, Paris 25 (4) : 221-230.
- 1983b. — Middle Triassic spicular Radiolaria. *EuroRad III, Bergen: July 19 to 24, 1982 - Third International Meeting of Radiolarists organized by EuroRad - Radiolaria*, Paris 7: 68.
- 1984. — Systematics of Sphaerellarian Radiolarians, in Petrushevska M. G. & Stepanjants

- S. D. (eds), Morphology, Ecology and Evolution of Radiolarians. *Proceedings of the Fourth Eurorad Conference, 15-19 October, Academy of Science, Leningrad*: 91-102 [in Russian].
- 1985. — Internal morphology of the Saturniidae (Radiolaria); systematic and phylogenetic consequences [Structure interne des Saturniidae (Radiolaria) : Systématique et conséquences phylogénétiques]. *Revue de Micropaléontologie*, Paris 28 (3) : 181-196.
- 1988. — Dactylosphaera-type Initial Skeleton: its Structure, Diversity and Phylogenetic Value (preliminary abstract). in Schmidt-Eiffing R. & Braun A. (eds), EURORAD V. First International Conference on Radiolaria. *Geologica et Palaeontologica*, Marburg: 14.
- Dumitrica P. & Mello J. 1982. — On the age of the Meliata Group and the Silica Nappe radiolarites (localities Držkovec and Bohunvo, Slovak Karst, CSSR). *Geologické Práce Spravy*, Bratislava, 77, s: 17-28.
- Dumitrica P., Kozur H. & Mostler H. 1980. — Contribution to the radiolarian fauna of the Middle Triassic of the Southern Alps. *Geologisch-Paläontologische Mitteilungen*, Innsbruck, 10, 1: 1-46.
- Dun W. S. et al. 1901. — Note on the occurrence of Diatoms, Radiolaria and Infusoria in the Rolling Downs Formation (Lower Cretaceous), Queensland. *Proceedings of the Linnean Society of New South Wales*, 26 pt. 2: 299-309.
- Dundo O.-P. & Zhamoida A. I. 1963. — Stratigrafiya mezozoiskikh otlozhenii basseina r. Velikoi i kharakternyi kompleks valanzhinskikh radiolyarii [Stratigraphy of the Mesozoic deposits of the Velikaya River Basin and the characteristic complexes of Valanginian Radiolarians], in Egiazarova B. Kh. (ed.), *Geologiya Koryakskogo Nagorya [Geology of the Koryaksk Highland]*, Moscow, Gosudarstvennoe Nauchno-Tekhnicheskoe Izdatel'stvo Literatury po Gornomu Delu, Moscow: 64-85..
- Dunikowski E. V. 1882. — Die Spongien, Radiolarien und Foraminiferen der unterhassischen Schichten vom Schafberg bei Salzburg. *Denkschriften der Kaiserlichen Akademie der Wissenschaften, Mathematische-Naturwissenschaftliche Classe*, Wien, 45, II: 163-194.
- Dyer R. & Copestake P. 1989. — A review of Late Jurassic to earliest Cretaceous radiolaria and their biostratigraphic potential to petroleum exploration in the North Sea, in Batten D. J. & Keen M. C. (eds), Northwest European Micropaleontology and Palynology. *The British Micropaleontological Society, Series*, Chichester: 214-235.
- Egorov A. Y. & Bragin N. Y. 1995. — First finds of radiolarians in triassic sediments of the North of Siberia. *Doklady Akademii Nauk SSSR*, 340 (5): 649-652.
- Ehrenberg C. G. 1846. — Über eine halbiolithische, von Herrn R. Schomburgk entdeckte, vorherrschend aus mikroskopischen Polycystinen gebildete, Gebirgsmasse von Barbados. *Monatsberichte der Königlich preussischen Akademie der Wissenschaften zu Berlin*: 382-385.
- 1854. — Die systematische Charakteristik der neuen mikroskopischen Organismen des tiefen Atlantischen Ozeans für den Monatsbericht zum Druck zu übergeben, deren Verzeichniß im Monat Februarbereits mitgetheilt worden ist. *Monatsbericht der Königlich Preussischen Akademie Wissenschaften, Abhandlungen*, Berlin: 236-250.
- Eicher D. L. 1960. — Stratigraphy and micropaleontology of the Thermopolis shale. *Yale University Bulletin*, 15, 76 p.
- Elbert J. 1902. — Das untere Angoumien in den Osningbergketten des Tentoburger Waldes. *Decheniana (Verhandlungen des Naturhistorischen Vereins des Rheinlande und Westfalens)* 58: 77-167.
- Eliseeva V. K., Lipman R. Kh. & Svystogorova N. N. 1976. — New data on the stratigraphy of central Sikhote-Alinj. *Geology and Physics. Siberian Department, Academy of Sciences, USSR*, Novosibirsk 11: 30-43.
- El-Kadiri Kh. 1984. — *Les radiolarites jurassiques des Klippes de Chrafate (Rif Septentrional, Maroc) : stratigraphie, taxonomie*. Thèse 3^e cycle, Université de Pau, 1, 347 p. (inédit).
- Empson-Motin K. M. 1981. — Campanian Radiolaria from Deep Sea Drilling Project Site 313, Mid-Pacific Mountains. *Micropaleontology*, New York 27 (3): 249-292.
- 1982. — Reexamination of the Late Cretaceous radiolarian genus *Amphypindax* Foreman. *Journal of Paleontology*, Tulsa, Oklahoma 56 (2): 507-519.
- Erbacher 1994. — Entwicklung und Paläoozeanographie mittelkretazischer Radiolarien der westlichen Tethys (Italien) und des Nordatlantiks. *Tübinger Mikro-paläontologische Mitteilungen* 12:1-120.
- Etheridge R. Jr & Dun W. S. 1902. — Catalogue of the Cretaceous fossils of Australia. *Memoirs of the Geological Survey New South Wales, Paleontology*, No. 11: 51-84.
- Ewing M., Wortzel J.-L., Beal A. O., Berggren W. A., Bukry D., Burk C. A., Fisher A. G. & Pessagno E. A. 1969. — Site 4 Summary, in Ewing M., Wortzel J. L. et al., *Initial Reports of the Deep Sea Drilling Project*, (U.S. Government Printing Office), Washington 1: 179-209.
- Feary D. A. & Hill P. H. 1978. — Mesozoic Radiolaria from cherts in the Raukumara Peninsula, New Zealand. *New Zealand Journal of Geology and Geophysics*, Wellington 21 (3): 363-373.
- Feary D. A. & Pessagno E. A. Jr 1980. — An Early Jurassic age for chert within the Early Cretaceous Oponae melange (Torlesse Supergroup), Raukumara Peninsula, New Zealand. *New Zealand*

- Journal of Geology and Geophysics*, Wellington 23: 623-628.
- Fenton M. W., Keene J. B. & Wilson C. J. L. 1982. — The sedimentology and environment of deposition of the Malacoota Beds, eastern Victoria. *Journal of the Geological Society of Australia*, Sidney 29: 107-114.
- Fischli H. 1916. — Beitrag zur Kenntnis der fossilen Radiolarien in der Riginagelfluh. *Mitteilungen der Naturwissenschaftlichen Gesellschaft in Winterthur, Jahrgang 1915-1916*, 11: 44-47.
- Flood P. G. 1988. — New England Orogen: Geosyncline, Mobile Belt and Terranes, in Kleemann J. D. (ed.), *New England Orogen: Tectonics and metallogenesis, Armidale*: 1-6.
- Florez Albin E. 1988a. — Campanian Radiolaria in Cuba, in Schmidt-Effing R. & Braun A. (eds), *First International Conference on Radiolaria, (EURO-RAD V)*, 21 & to 24 July 1988 (abstract), *Geologica and Palaeontologica*, Marburg: 14.
- 1988b. — Radiolarios del Campaniano de Cuba. *Colaboracion cubana al Proyecto PICG - 165 "Correlacion estratigrafica regional del Caribe"*, La Habana 165: 1-91 [in Spanish].
- Foreman H. P. 1966. — Two Cretaceous radiolarian genera. *Micropaleontology*, New York 12 (3): 355-359.
- 1968. — Upper Maestrichtian Radiolaria of California. *The Palaeontological Association. Special Papers in Palaeontology*, London 3: 1-82.
- 1971. — Cretaceous Radiolaria. Deep Sea Drilling Project, in Winreret E. L., Riedel W. R. et al., *Initial Reports of the Deep Sea Drilling Project, (U.S. Government Printing Office)*, Washington VII: 1673-1693.
- 1973a. — Radiolaria of Leg 10 with systematics and ranges for the families Amphipyndacidae, Artostrobiidae, and Theoceridae, in Worze J. L., Bryant W. et al., *Initial Report of the Deep Sea Drilling Project, (U.S. Government Printing Office)*, Washington X: 407-474.
- 1973b. — Radiolaria from Deep Sea Drilling Project Leg 20, in Heezen B. C., MacGregor J. D. et al., *Initial Reports of the Deep Sea Drilling Project, (U.S. Government Printing Office)*, Washington XX: 249-305.
- 1975. — Radiolaria from the North Pacific. Deep Sea Drilling Project Leg 32, in Larson R. L., Moberley R. et al., *Initial Reports of the Deep Sea Drilling Project, (U.S. Government Printing Office)*, Washington XXXII: 579-676.
- 1977. — Mesozoic Radiolaria from the Atlantic Basin and its borderlands: 305-320, in Swain F. M. (ed.), *Stratigraphic Micropaleontology of Atlantic Basin and Borderlands*. Elsevier Scientific Publication Company, Amsterdam.
- 1978a. — Cretaceous Radiolaria in the Eastern South Atlantic, Deep Sea Drilling Project. Leg 40, in Bolli H. M. & Ryan W. B. F. et al., *Initial Reports of the Deep Sea Drilling Project, (U.S. Government Printing Office)*, Washington XL: 839-843.
- 1978b. — Mesozoic Radiolaria in the Atlantic ocean off the Northwest coast of Africa. Deep Sea Drilling Project Leg 41, in Lancelot Y., Seibold E. et al., *Initial Reports of the Deep Sea Drilling Project, (U.S. Government Printing Office)*, Washington XLI: 739-761.
- Foreman H. P. & Riedel W. R. 1972. — Catalogue of polycystine Radiolaria. *Special Publication, 1834-1900, (Meyen 1834 - Bury 1862)*, *American Museum of Natural History*, New York, 1, 1, part 1 and 2.
- Frenquelli J. 1941. — Silicoflagelados y Radiolarios del Tripoli del Valle de Til-Til (Chile). *Notas del Museo de la Plata, Paleontologia*, Buenos Aires, 6, 28: 93-100.
- Fric A. 1893. — Studien im Gebiete der bohmischen Kreideformation. *Palaeontologische Untersuchungen der einzelnen Schichten. v. Priesener Schichten. Archiv der Naturwissenschaft Landesforschung von Bohmen*, 9, 1 (Geologische Abteilung): 1-135.
- Frizzell D. L. & Middour E. S. 1951. — Paleocene Radiolaria from southeastern Missouri. *Bulletin University of Missouri School of Mines and Metallurgy, Technical Series*, No. 77, 41 p.
- Fujimoto H. 1933a. — Origin of the Radiolarian cherts in the Kwanto Mountainland (Preliminary Report). *Journal of Natural History (Hakubutsugaku-Zasshi)*, Tokyo 31: 85-96 [in Japanese].
- 1933b. — Stratigraphic study on the Radiolarian chert of the Kwanto mountainland. *Journal of the Geological Society of Japan*, Tokyo 40: 411-415.
- 1939. — Study of the radiolarian Fossils. No. 1: Chichibu System. *Journal of the Geological Society of Japan*, Tokyo 46: 337-340 [in Japanese].
- Fujita H. 1983. — Cretaceous Radiolarians from the Motobu Peninsula, Okinawa-jima. *Chikyū (Earth)*, Tokyo 5: 733-738 [in Japanese].
- Furter H. 1951. — Die Tithon-Berriasbreccien von Hahnenmoospass, SW Adelhöden (Berner Oberland) Ultrahelvetikum der Sattelzone. *Eclogae geologicae Helveticae*, 43, 2 (for 1950): 161-166.
- Galavis F. S. 1951. — Los organismos silíceos y sus posibles usos en metodoscórelativos. *Ministerio de Minas e Hidrocarburos Boletín de Geología Dirección de Geología, Venezuela, Caracas*, 1, 3: 314-324.
- Geyer O. 1961. — Der erste Nachweis einer Radiolarie im süddeutschen Oberjura. *Geologische Blätter für Nordost-Bayern und angrenzende Gebiete, Erlangen*, 11: 101-103.
- Göke G. 1959. — Einführung in das Studium der Radiolarien. Teil I: Fang, Lebendbeobachtung und Präparation der receneten Radiolarien. Teil II: Gewinnung und Präparation der fossilen Radiolarian. *Mikrokosmos*, 48: 144-148, 357-361.

- Goll R.-M. & Merinfeld E. G. 1979. — "Radiolaria", in Fairbridge R. W., Jablonski D. (eds), *The Encyclopedia of Paleontology. Encyclopedia of Earth Sciences Series*. Dowden, Hutchinson, Ross., Stroudsburg VII: 673-684.
- Goltman E. V. 1969. — Pervye dannye orodovykh kompleksakh triasovykh radiolyarii yugo-vostochnogo Pamira [First data on the generic complexes of the Triassic radiolarians of the southeastern Pamira]. *Izdatelstvo Lvovskogo Universiteta [Lvov University] Lvov, USSR: 25-28.*
- 1971. — O nekotorykh pozdne-melovykh radiolyariyakh podsemeystva plegmosphaerinae iz Tadzhikskoi depressii [On some of the Late Cretaceous radiolarians of the Subfamily Plegmosphaerinae from the Tadzhik depression]. *Drevnie Radiolarii Srednei Azii: Sbornik Nauchnykh Trudov [Ancient Radiolarians of Middle Asia: Collection of scientific articles] n° 2: 22-37.*
- 1973. — Pervye dannye o kompleksakh radiolyarii iz kampanaskikh imaastrikhskikh otlozhenii Tadzhikskoi depressii. *Tadzhikskii Gosudarstvennyi Universitet, Kafedra Geologii i Paleontologii, Drevnie Radiolyarii Srednei Azii 3: 13-33.*
- 1975. — Stranigraficheskoe raspostranenie pozdne-melovykh radiolyarii Tadzhikskoi depressii. *Trudy Vsesoyuznogo Ordena Lenina Nauchno-Issledovatel'skogo Geologicheskogo Instituta (VSEGEI) 226: 70-78.*
- 1981. — Znachenie radiolyarii dlya korrilyatsii senonskikh otlozhenii Tadzhikskoi depressii, in Krashneninikov V. A. (ed.), *Sistematika, Evolyutsiya i Stratigraficheskoe Znachenie Radiolyarii [Systematic, Evolution and Stratigraphic Importance of Radiolaria], Academy of Science of USSR, Nauka, Moscow: 73-82 [in Russian].*
- 1984. — The new Campanian Spongodiscoidea of the Tadzhik Depression, in Petrushevska M. G. & Stepanjants S. D. (eds), *Morphology, ecology and Evolution of Radiolarians, Proceedings of the Fourth Eurorad Conference, 15-19 October, Academy of Science, Leningrad: 194-195 [in Russian].*
- Goltman E. V. & Babaeva B. 1985. — Evolution of the Senonian Radiolarians of the Tadzhik Depression in the connection with the history of the basin. *Eurorad IV, Leningrad October 15 to 19, 1984 - Fourth International Meeting of Radiolarists organized by Eurorad - Radiolaria, Paris 9: 56.*
- Gorbachik T. N. & Druchiz V. V. 1959. — Albian deposits of the south-eastern Crimea. *Vestnik Moskovskogo Universiteta, seriya geologii 3: 117-122.*
- Gorbunov V. S. 1979. — *Middle and Upper Eocene radiolarians from the Dnieper-Donets Depression.* Kiev, Naukova dumka, 200p.
- Gorican S. 1983. — Radiolariji v jurskem meljevcu med Perblo in Tolminskimi Ravnami [Radiolarians from the Jurassic silstone between Perbla and Tolminsk Ravne]. *Geologija, Ljubljana 26: 117-145.*
- 1987. — Jurassic and Cretaceous Radiolarians from the Budva Zone (Montenegro, Yugoslavia) [Les Radiolaires du Jurassique et du Crétacé de la zone de Budva (Monténégro, Yougoslavie)]. *Revue de Micropaléontologie, Paris 30 (3) : 177-196.*
- 1988. — Middle Triassic Radiolarians from NW Yugoslavia, in Schmidt-Effing R. & Braun A. (eds), *First International Conference on Radiolaria, (EURORAD V), 21 to 24 July 1988, (abstract), Geologica and Palaeontologica, Marburg: 15.*
- 1994. — Jurassic and Cretaceous radiolarian biostratigraphy and sedimentary evolution of the Budva Zone (Dinarides, Montenegro). *Mémoires de Géologie, Lausanne, 18, 120 p.*
- Gorican S. & Buset S. 1990. — Middle Triassic radiolarians from Slovenia (Yugoslavia). *Geologija 31-32: 133-197.*
- Gorican S. & Kolar-Jurkovsek T. 1984. — Some Triassic and Jurassic Radiolarians from Slovenia, in Petrushevska M. G. & Stepanjants S. D. (eds), *Morphology, Ecology and Evolution of Radiolarians, Proceedings of the Fourth Eurorad Conference, 15-19 October, Academy of Science, Leningrad: 149-158 [in English].*
- Gorka H. 1988. — Les Radiolaires du Crétacé de la Pologne, in Schmidt-Effing R. & Braun A. (ed.), *First International Conference on Radiolaria, (EURORAD V), 21 to 24 July 1988 (abstract), Geologica and Palaeontologica, Marburg: 15.*
- Gowing M. M. & Silver M. 1985. — Minipellets, a new and abundant size class of marine fecal pellets. *Journal of Marine Research 43 (2): 395-418.*
- Grill H.-J. & Kozur H. 1986. — The first evidence of the *Unuma echinatus* radiolarian zone in the Rudabanya Mts (Northern Hungary). *Geologisch-Palaeontologische Mitteilungen, Innsbruck, 13, 11: 239-275.*
- Grimes G. E. 1895. — Two occurrences of radiolarians in English Cretaceous rocks. *Geological Magazine, new series, decade 4, volume 2, No. 8: 345-347.*
- Gursky H.-J. 1988. — Gefüge, Zusammensetzung und Genese der Radiolarite im ophiolitischen Nicoya-Komplex (Costa Rica). *Münstersche Forschungen zur Geologie und Paläontologie, Münster, 68, 189 p.*
- Gursky H.-J. & Schmidt-Effing R. 1983. — Sedimentology of Radiolarites within the Nicoya Ophiolite Complex, Costa Rica, Central America, in Iijima A., Siever R. & Hein J. R. (eds), *Siliceous deposits in the Pacific Region. Developments in Sedimentology.* Elsevier, Amsterdam 36: 127-142.
- Gursky H.-J., Schmidt-Effing R., Strebin R. & Wildberg H. 1982. — The ophiolite sequence in Northwestern Costa Rica (Nicoya Complex): outlines of stratigraphical, geochemical, sedimentological and tectonical data. *Quinto Congreso Latino-Americano de Geología, Buenos Aires, Actes III: 607-619.*

- Haeckel E. 1881. — Entwurf eines Radiolarien-Systems auf Grund von Studien der Challenger-Radiolarien. *Genauische Zeitschrift für Naturwissenschaft*, Jena, 15: 418-472.
- 1887. — The voyage of the H.M.S. *Challenger*. *Report of the Scientific Results on the radiolarian collections by H.M.S. Challenger*, Zoology, 18, 1803 p.
- Hatori I. 1984. — Alternating clastic limestone and red chert as olistolith in the Mino Terrane, Central Japan. *Journal of the Geological Society of Japan*, Tokyo 90 (1): 43-54.
- 1987. — Jurassic Radiolarian Fossils from the Nanjo Massif, Fukui Prefecture, Central Japan. *Bulletin of the Fukui Municipal Museum of Natural History*, Fukui 34: 29-101 [in Japanese with English summary].
- 1988. — Radiolarian fossils from manganese nodules at the upper reach of the Tarumigawa in the Nanjo Massif, Fukui Prefecture, Central Japan, and the tectonic significance of the northwestern Mino Terrane. *Bulletin of the Fukui Municipal Museum of Natural History*, Fukui 35: 55-101 [in Japanese with English summary].
- 1989. — Length-Slow Chalcidony in Sedimentary Rocks of the Mesozoic Allochthonous Terrane in Central Japan in its use for tectonic synthesis: 201-215, in Hein J. R. & Obradovic J. (eds), *Siliceous Deposits of the Tethys and Pacific regions*. Springer-Verlag, New York, Berlin.
- Hatori I. & Yoshimura M. 1983. — Late Triassic to Middle Jurassic Ages for Greenstones within the Mesozoic Nanjo Massif of the Mino Terrane, Central Japan. *Memoirs of the Faculty of Education*, Fukui University, 2, 32: 67-80 [in Japanese with English abstract].
- Hayasaka Y., Isozaki Y. & Hara I. 1983. — Discovery of Jurassic Radiolarians from the Kuga and Kanoashi Groups in the Western Chugoku district, Southwest Japan. *Journal of the Geological Society of Japan*, Tokyo 89: 527-530 [in Japanese].
- Heitzer I. 1930. — Die Radiolarien fauna der mitteljurassischen Kieselmergel im Sonnwendgebirge. *Jahrbuch der Geologischen Bundesanstalt*, Wien 80: 381-406.
- Herm D. 1962. — Stratigraphische und mikropalaontologische Untersuchungen der Oberkreide im Lattengebirge und Nierental (Gosauböcken von Reichenhall und Salzburg). *Bayerische Akademie der Wissenschaften, Mathematisch-Naturwissenschaftliche Klasse, Abhandlungen*, neue Folge, n° 104: 1-110.
- Hill W. 1912. — Rocks containing Radiolaria. *Proceedings of the Geologists' Association*, London 23: 62-91.
- Hill W. & Jukes-Browne A. J. 1895. — On the occurrence of Radiolaria in Chalk. *Quarterly Journal of the Geological Society of London*, 51: 600-608.
- Hinde G. J. 1893. — Note on a Radiolarian Rock from Fanny Bay, Port Darwin, Australia. *Quarterly Journal of the Geological Society of London*, London, 49, 194: 221-226.
- 1894. — Note on the Radiolarian Chert from Angel Island, and from Buri-Buri Ridge, San Mateo County, California, in Ransome F. L. (ed.), *The geology of Angel Island, California University Department of Geology, Bulletin*, Berkeley, 1, 7: 235-240.
- 1897. — Note on a Radiolarian Chert from the Island of Billiton, in Verbeek R. D. M. (ed.), *Geologische beschrijving van Bangka en Billiton, Jaarboek van het mijnwezen in Nederlandsch Oost-Indie*, Amsterdam, Appendix, 26, 1: 223-227.
- 1900. — Appendix I: Description of fossil Radiolaria from the rocks of Central Borneo: 1-51, 54-56, in Molengraaff G. A. F. (ed.), *Borneo-Expedition: Geological exploration in Central Borneo 1893-94* (*Borneo-Expeditie, Geologische Verkenningstochten in Centraal-Borneo 1893-94*). Society for the Promotion of the Scientific Exploration of the Dutch Colonies, Brill E. J. and Gerlings H., Amsterdam, Leyden.
- 1908. — Radiolaria from the Triassic and other rocks of the Dutch East Indian Archipelago, in Verbeek R. D. M. (ed.), *Geologische verkenningstochten in het oostelijke gedeelte van den Nederlandsch Oost-Indischen Archipelago, Jaarboek van het Mijnwezen in Nederlandsch Oost-Indie*, Molukken-Verslag, Amsterdam 37: 694-736.
- 1917. — Notes on specimens of organic rocks from Central Celebes collected by Mr. E. C. Abendanon, in *Midden-Celebes-expeditie by Abendanon E. C. Midden-Celebes-Expeditie Geologische en geographischdoorkrnsingen van Midden-Celebes 1909-1910*. Brill E. J., Leiden 3: 953-958.
- Hisada K. I. & Kishida Y. 1986. — The Hamadaira Group in the western Kanto Mountains, Central Japan - the developmental processes of the Jurassic-Lower Cretaceous accretionary prism. *Journal of the Geological Society of Japan*, Tokyo, 92, 8: 569-590.
- Hisada K. I., Ueno H. & Kishida Y. 1986. — Occurrence of Cretaceous radiolarians from the Kobotoke Group, Kanto Mountains, Central Japan, in *Recent Progress of Research on Radiolarians and radiolarian Terranes of Japan*. *News of Osaka Micropaleontologists*, Special Volume, Osaka 7: 255-258 [in Japanese with English abstract].
- Hojnos R. 1916. — Beiträge zur Kenntnis der ungarischen fossilen Radiolarien. *Földtani közlöny*, Budapest 46: 340-364.
- 1929. — Beiträge zur Mikropalaontologie des Klippenzuges der Nordwest-Karpathen. *Földtani közlöny*, Budapest 50: 182-196.
- 1934. — Verslag over een micropalaontologisch onderzoek van sedimentair gesteenten uit Celebes. *Verhandelingen van het Nederlandsch Geologisch-*

- mijnbouwkundig genootschap, Geologische serie*, Gravenhage 10 (3): 291-294.
- Hollis C. J. 1991. — Well-Preserved late Paleocene Radiolaria from Tangihua Complex, Camp Bay, eastern Northland. *Tane* 33: 65-76.
- Holmes W. M. 1900. — On Radiolaria from the Upper Chalk at Coulsdon (Surrey). *Quarterly Journal of the Geological Society of London*, 6: 694-704.
- Holzer H.-L. 1980. — Radiolaria aus Atzrückständen des Malm und der Unterkreide der Nordlichen Kalkalpen (Österreich). *Annalen Naturhistorische Museum*, Wien 83: 153-167.
- Hori R. 1986. — *Parahsuum simplicum* Assemblage [Early Jurassic radiolarian assemblage] in the Inuyama area, central Japan. *News of Osaka Micropaleontologists*, Special Volume, Osaka 7: 45-52 [in Japanese with English abstract].
- 1988. — Some characteristic radiolarians from lower jurassic bedded cherts of the Inuyama area, southwest Japan. *Transactions and Proceedings of the Palaeontological Society of Japan*, N. S., Tokyo 151: 543-563, 9 figs.
- Hori R. & Yao A. 1988. — *Parahsuum* (Radiolaria) from the Lower Jurassic of the Inuyama Area, Central Japan. *Journal of Geosciences, Osaka City University*, Osaka 31 (3): 47-61 [in English].
- Hudson R. G., McGugan A. & Morton D. M. 1954. — The structure of the Jebel Hagab area, Trucial Oman. *Quarterly Journal of the Geological Society of London*, London CX: 121-152.
- Huzimoto H. 1938. — Radiolarian remains discovered in a crystalline schist of the Sambagawa System. *Proceedings of the Imperial Academy of Japan*, Tokyo 14: 252-254.
- Ichikawa K. 1946. — A study on the Radiolaria as the index-fossils. *Journal of the Geological Society of Japan*, Tokyo, 52, 610-612: 25-28 [in Japanese].
- 1950. — A study on the radiolarian fauna of Mt Mitake in the Southeastern part of the Kwanto mountainland, Japan. *Journal of the Faculty of Science*, Tokyo, section 2, 7, 5: 281-315.
- 1953. — Fossil radiolaria. *Earth Science (Chikyū Kagaku)*, Tokyo 14: 9-16 [in Japanese].
- 1986. — Mesozoic Radiolarian Terranes (MRT) of Southwest Japan, in *Recent Progress of Research on radiolarians and radiolarian Terranes of Japan*, *News of Osaka Micropaleontologists*, Special Volume, Osaka, 7: 315-325 [in Japanese with English abstract].
- Ichikawa K. & Yao A. 1976. — Two new genera of Mesozoic cyrtoid Radiolarians from Japan, in Takayanagi Y. & Saito T. (eds). *Progress in Micropaleontology, Special Publication, Micropaleontology Press*, New York: 110-117.
- Ichikawa K., Hada S. & Yao A. 1985. — Recent problems of Paleozoic-Mesozoic microbiostratigraphy and Mesozoic geohistory of Southwest Japan. *The Memoirs of the Geological Society of Japan*, Tokyo 25: 1-18.
- Igo H. & Nishimura H. 1984. — The Late Triassic and Early Jurassic radiolarian biostratigraphy in the Karasawa, Kuzuu town, Tochigi Prefecture (Preliminary Report). *Bulletin of Tokyo Gakuzei University*, Tokyo, section 4, 36: 173-193.
- Igo H., Sashida K. & Ueno H. 1987. — Early Cretaceous radiolarians from the Esashi Mountains, northern Hokkaido. *Annual Report of the Institute of Geoscience of the University of Tsukuba*, Tsukuba 13: 105-109 [in English].
- Imoto N. 1984a. — Late Paleozoic and Mesozoic cherts in the Tamba Belt, Southwest Japan (part 1). *Bulletin of Kyoto University of Education*, Kyoto, B, 65: 15-40.
- 1984b. — Late Paleozoic and Mesozoic cherts in the Tamba Belt, Southwest Japan (part 2). *Bulletin of Kyoto University of Education*, Kyoto, B, 65: 41-71.
- Imoto N., Tamaki A., Tanabe T. & Ishiga H. 1982. — An age determination on the basis of Radiolarian biostratigraphy of a bedded manganese deposit at the Yuniyama Mine in the Tamba district, Southwest Japan. *News of Osaka Micropaleontologists*, Special Volume, Osaka 5: 227-236.
- Innocenti G. D. 1927. — Le radiolarie dei diaspri di Rivara Canavese. *Bollettino della Società Geologica Italiana* 46 (2): 141-170.
- Irwin W.-P., Jones D. L. & Pessagno F. A. Jr 1977. — Significance of Mesozoic radiolarians from the pre-Nevadan rocks of the southern Klamath Mountains, California. *Geology*, Boulder 5: 557-562.
- Isaacs C. M. 1981. — Porosity reduction during diagenesis of the Monterey Formation, Santa Barbara coastal area, California, in Garrison *et al.* (eds.), *The Monterey Formation and related Siliceous rocks of California*. *Society of economics, Paleontologists and Mineralogists*, Special Publication 15: 257-271.
- 1982. — Influence of rock composition on kinetics of silicate phase changes in the Monterey Formation, Santa Barbara area, California. *Geology*, Boulder, 10, 6: 304-308.
- Ishida K. 1983. — Stratigraphy and radiolarian assemblages of the Triassic and Jurassic siliceous sedimentary rocks in Konose Valley, Tokushima Prefecture, Southwest Japan. — Studies of the South Zone of the Chichibu Belt in Shikoku. Part 4. *Journal of Science of College of General Education, University of Tokushima*, Tokushima XVI: 111-141 [in Japanese with English abstract].
- 1985. — Pre-Cretaceous sediments in the Southern North Zone of the Chichibu Belt in Tokushima Prefecture, Shikoku. *Journal of the Geological Society of Japan*, Tokyo, 91, 8: 553-567.
- Ishida K. 1986a. — Discovery of Jurassic radiolarians from the "Sambosan Group" at Hitsuzan, Kochi City, Shikoku and its significance. *Journal of the*

- Geological Society of Japan*, Tokyo, 92, 2: 159-161.
- 1986b. — Geology and radiolarian ages of the Mesozoic formations in the South Zone of the Chichibu Belt in eastern Shikoku. *News of Osaka Micropaleontologists*, Special Volume, Osaka 7: 235-243 [in Japanese with English abstract].
- Ishida S. 1979. — A Contribution to the Paleogeography of the First Setouchi Sea in Southwest Japan. *News of Osaka Micropaleontologists*, Osaka 7: 1-48.
- Ishiga H. & Ishiyama D. 1987. — Jurassic accretionary complex in Kaminokuni Terrane, Southwestern Hokkaido, Japan. *Mining Geology*, Akita, 37, 6: 381-394.
- Ishiga H. & Kusu T. 1986. — Ultra-Tamba Zone in western part of Hyogo Prefecture, Southwest Japan, in Recent Progress of Research on Radiolarians and radiolarian Terranes of Japan. *News of Osaka Micropaleontologists*, Special Volume, Osaka 7: 167-174 [in Japanese with English abstract].
- Ishizuka H., Okamura M. & Saito Y. 1983. — Latest Jurassic Radiolarians from the Horokanai Ophiolite in the Kamuikotan zone, Hokkaido, Japan. *Journal of the Geological Society of Japan*, Tokyo 89: 731-732.
- 1984. — Early Cretaceous Radiolarians from the Sorachi Group at the Pippu area, Central Hokkaido, Japan. *Journal of the Geological Society of Japan*, Tokyo 90 (1): 59-69.
- Isozaki Y. 1986. — The Shingai Formation, end-Permian convergent margin product in the northern Chichibu Belt, Southwest Japan, in Recent Progress of Research on Radiolarians and radiolarian Terranes of Japan. *News of Osaka Micropaleontologists*, Special Volume, Osaka 7: 203-209 [in Japanese with English abstract].
- Isozaki Y. & Matsuda T. 1980. — Age of the Tamba Group along the Hozugawa "Anticline", Western Hills of Kyoto, Southwest Japan. *Journal of Geosciences, Osaka City University*, Osaka 23: 115-134.
- 1985. — Early Jurassic radiolarians from bedded chert in Kamiaso, Mino Belt, Central Japan. *Earth Science (Chikyū Kagaku)*, Tokyo, 39, 6: 429-442.
- Isozaki Y., Maejima W. & Maruyama S. 1981. — Occurrence of Jurassic Radiolarians from the Pre-Cretaceous rocks in the northern subbelt of the Chichibu Belt, Wakayama and Tokushima Prefectures. *Journal of the Geological Society of Japan*, Tokyo, 87, 8: 555-558 [in Japanese].
- Iwasaki T., Sashida K. & Igo H. 1984. — Discovery of Cretaceous radiolarians from the Chichibu Belt near the Mt. Ogura in Minamiaki Village, Minamiku County, Nagano Prefecture, Central Japan. *Journal of the Geological Society of Japan*, Tokyo, 90, 5: 349-352.
- Iwata K. & Kato Y. 1986. — Upper Cretaceous Radiolarians of the Yubetsu Group and the Hidaka Supergroup in the northern Hidaka Belt, in Recent Progress of Research on Radiolarians and radiolarian Terranes of Japan. *News of Osaka Micropaleontologists*, Special Volume, Osaka 7: 75-86 [in Japanese with English abstract].
- Iwata K., Uozumi S., Nakamura K. & Tajira J. 1983a. — Discovery of Radiolarians and Holothurian sclerites from the Pre-Tertiary System around Nishiokoppe, Northeast Hokkaido (Preliminary report). *Journal of the Geological Society of Japan*, Tokyo 89: 55-56 [in Japanese].
- Iwata K., Watabe M., Nakamura K. & Uozumi S. 1983b. — Occurrence of Jurassic and Cretaceous Radiolarians from the Pre-Tertiary Systems around Lake Saroma, Northeast Hokkaido (Preliminary Report). *Earth Science (Chikyū Kagaku)*, Tokyo 37 (4): 225-228 [in Japanese].
- Iyota N., Sashida K. & Igo H. 1984. — Occurrence of Late Cretaceous radiolarians from the Ogochi Group, Kanto Mountains, Central Japan. *Journal of the Geological Society of Japan*, Tokyo, 90, 6: 415-416.
- Jaccard F. 1909. — Les Grès et Calcaires à Radiolaires. *Bulletin de la Société Vaudoise des Sciences Naturelles*, Lausanne, 5, 45, 167: 365-368.
- Jodot P. 1931. — Âge des roches à radiolaires de la Nappe Ophiolitique dans le NW de la Corse. *Compte-rendu sommaire des séances de la Société géologique de France*, n° 13: 177-179.
- Jud R. 1994. — Biochronology and systematics of Early Cretaceous radiolarian of the Western Tethys. *Mémoires de Géologie*, Lausanne, 19, 147 p.
- Kakuwa Y. 1987. — Petrography and Geochemistry of Argillaceous Rocks Associated with Triassic to Jurassic Bedded Chert of the Mino-Tamba Terrane. *Scientific Papers of the College of Arts and Sciences (formerly the College of General Education), The University of Tokyo*, Tokyo, 36, 2: 137-162.
- 1988a. — Geochemical Study of Triassic to Jurassic bedded cherts in the Ashio, Mino and Tamba Terranes in Japan. *Scientific Papers of the College of Arts and Sciences, The University of Tokyo*, Tokyo, 38, 1: 17-41.
- 1988b. — Sedimentary Petrographical Studies on the Triassic to Jurassic Bedded Chert in the Ashio, Mino and Tamba Terranes in Japan, in Schmidt-Effing R. & Braun A. (ed.), First International Conference on Radiolaria, (EURO-RAD V), 21 to 24 July 1988 (abstract), *Geologica and Palaeontologica*, Marburg: 21.
- Kamon M. & Taketomi H. 1982. — Stratigraphy of the Mesozoic strata around the Arita River, Southwest Japan. *News of Osaka Micropaleontologists*, Osaka 9: 11-22 [in Japanese with English abstract].
- Kanie Y., Taketani Y., Sakai A. & Miyata Y. 1981. — Lower Cretaceous deposits beneath the Yezo Group in the Urakawa area, Hokkaido. *Journal of the Geological Society of Japan*, Tokyo, 87, 8: 527-533 [in Japanese with English abstract].

- Kanomata N. 1959. — A study on the radiolarian fauna at Gozenyama in the Northern Part of the Toriashi mountainland, Ibaraki Prefecture. *Journal of Arts and Sciences*, Chiba University 2: 304-308.
- 1960a. — A Radiolarian Fauna at Odaira, Ibaraki Prefecture, Japan. *Journal of Arts, Sciences*, Chiba University 3: 213-220.
- 1960b. — A radiolarian Fauna at Nokura, Ibaraki Prefecture, Japan. *Journal of Arts and Sciences*, Chiba University 1: 93-97.
- Kanomata N. & Iwashita F. 1964. — Study on the radiolarian fauna at the Mineoka Group in the Southern part of the Boso Peninsula, Chiba Prefecture. *Journal of Arts and Sciences*, Chiba University 4: 69-72.
- Karakitsios V., Danelian T. & De Wever P. 1988. — Darations par les Radiolaires des Calcaires à Filaments, Schistes à Posidonies supérieurs et Calcaires de Viglia (zone ionienne, Epire, Grèce) du Callovien au Tithonique terminal. *Comptes Rendus de l'Académie des Sciences*, Paris, II, 306 : 367-372.
- Karitskii A. D. 1889. — Radiolyariyevi ooz Simbirskoi gub. [Radiolarian oozes of the Simbirsk district], *Zapiski Kievskogo Obshchestva Estestvoispytatelei*, 10, n° 1: LX.
- Kashima N. 1986. — Jurassic olistostrome Futaiwa Formation of Northwestern edge of the chichibu Belt in Western Shikoku. *News of Osaka Micropaleontologists*, Special Volume, Osaka 7: 225-233 [in Japanese with English abstract].
- Kastner M. 1981. — Authigenic silicates in deep-sea sediments: formation and diagenesis, in Emiliani C. (ed.), *The oceanic lithosphere*, The sea, volume 7, John Wiley and sons: 915-980.
- Kawabata K. 1988. — New species of Latest Jurassic and Earliest Cretaceous radiolarians from the Sorachi Group in Hokkaido, Japan. *Bulletin of the Osaka Museum of Natural History*, Osaka 43: 1-13, 3 pls.
- Kawada K. 1953. — Geological studies on the Yamiso, Torinoko and Toriashi Mountain Blocks and their neighbourhood in the Northeastern Kwanto District. *Science Reports of the Tokyo Bunkyo Daigaku*, Section C, Tokyo Bunrika Daigaku, 2, 15: 217-307.
- Kazintsova L. 1981. — Cenomanian Radiolaria from the Zapadno Coralunski, in Krashneninikov V. A. (ed.), *Sistematika, Evolyutsiya i Stratigraficheskoe Znachenie Radiolyarii* [Systematic, Evolution and Stratigraphic Importance of Radiolaria]. *Academy of Sciences of USSR, Nauka*, Moscow: 88-91 [in Russian].
- 1984. — Cretaceous Radiolarians of the Ukrainian Carpathians, in Petrushevskii M. G. & Stepanjants S. D. (eds), *Morphology, Ecology and Evolution of Radiolarians. Proceedings of the Fourth Eurorad Conference, 15-19 October, Academy of Science*, Leningrad: 172-186 [in Russian].
- 1985. — Late Cretaceous Radiolarians from cherts of Eastern Sakhalin. *Eurorad IV, Leningrad October 15 to 19, 1984 - Fourth International Meeting of Radiolarists organized by Eurorad-Radiolaria*, Paris 9: 58.
- Kazintsova L. & Vishnevskaya V. 1988. — Cretaceous Radiolarian of the URSS, in Schmidt-Effing R. & Braun A. (eds), *First International Conference on Radiolaria (EURO-RAD V) 21 to 24 July 1988 (abstract)*. *Geologica et Palaeontologica*, Marburg: 22.
- Keene J. B. 1976. — *Distribution, mineralogy, and petrography of biogenic and authigenic silica in the Pacific Basin*, Ph. D. Thesis, University of California at San Diego, 264 p.
- Kellogg D. E. 1982. — Phenology of morphological change in radiolarian lineages from deep-sea cores: Implications for Macroevolution. *Third North American Paleontological Convention, Proceedings 1*: 281-284.
- Khabakov A. V. 1937. — Fauna radiolyarii iz nizhnemelovykh i verkhneyurskikh fosforitov basseina verkhnei Vyatki i Kama. [The Radiolarian Fauna from the Lower Cretaceous and Upper Jurassic Phosphorites in the Basin of the Upper Vyatka and Kama]. *Ezhednevnik Vserossiiskogo Paleontologicheskogo Obshchestva, 1934-1935*, Leningrad, Moscow 11: 90-116.
- 1932. — Ob iskopaemykh radiolyariyakh iz slantsev severnoi kamchatki [On fossil Radiolaria from Northern Kamchatka]. *Vsesoiuznoe Geologo-Razvedochnoe Ob'edineniye*, 51, pt. 46: 689-695.
- Khoklova I.-E., Bragina L. G., Krashneninikov V. A. 1994. — Zonal stratigraphy of the Upper Cretaceous and Paleogene deposits of the Key Parapedhi section (Southern Cyprus) by means of radiolarians and correlation with the foraminiferal zones: 219-249, in *Geological structure of the NE Mediterranean*. Israel.
- Khudyayev I. E. 1931. — O radiolyariyakh v fosforitakh Sysolskogo raiona [On the Radiolaria in phosphorites of the Sysolsk area]. *Trudy Glavnago Geologo-Razvedochnogo Upravleniya VSNKh, SSR* [Transactions of the Geological and Prospecting Service USSR], Fasc. 46: 1-48.
- Kido S. 1982. — Occurrence of Triassic chert and Jurassic siliceous shale at Kamiiso, Gifu Prefecture, Central Japan. *News of Osaka Micropaleontologists*, Special Volume, Osaka 5: 135-151 [in Japanese with English abstract].
- Kido S., Kawaguchi I., Adachi M. & Mizutani S. 1982. — On the Dictyomitrella (?) kamaensis-Pantanelium foreatum Assemblage in the Mino area, central Japan. *News of Osaka Micropaleontologists*, Special Volume, Osaka, 5: 195-210 [in Japanese with English abstract].
- Kiminami K., Suizi M. & Kontani Y. 1983. — Discovery and significance of Cretaceous Radiolarians from the Mesozoic in the Tokoro Belt, Eastern Hokkaido, Japan. *Earth Science (Chikyū Kagaku)*, Tokyo 37: 48-52 [in Japanese].

- Kimura T. 1944a. — The Radiolarian fauna of the Naradani Formation in the Sakawa Basin in the Provinces of Tōsa. *Japanese Journal of Geology and Geography*, Tokyo 19 (1-4): 273-279.
- 1944b. — A study on the Radiolarian chert at Fukuda on the Southeastern Border of the Sakawa basin in the Province of Tōsa. *Japanese Journal of Geology and Geography*, Tokyo 19 (1-4): 281-284.
- 1944c. — Some Radiolarians in Nippon. *Japanese Journal of Geology and Geography*, Tokyo 19 (1-4): 285-288.
- Kishida Y. & Hisada K. I. 1985. — Late Triassic to Early Jurassic Radiolarian assemblages from the Ueno-mura area, Kanto Mountains, Central Japan. *Memoirs of Osaka Kyoiku University*, Osaka, III, 34, 2: 103-129.
- 1986. — Radiolarian Assemblages of the Sambosan Belt in the western part of the Kanto Mountains, Central Japan, in Recent Progress of Research on Radiolarians and radiolarian Terranes of Japan. *News of Osaka Micropaleontologists*, Special Volume, Osaka 7: 25-34 [in Japanese with English abstract].
- Kishida Y. & Sugano K. 1982. — Radiolarian zonation of Triassic and Jurassic in outer side of Southwest Japan. *News of Osaka Micropaleontologists*, Special volume, Osaka 5: 271-300 [in Japanese with English abstract].
- Kito N. & De Wever P. 1988. — Les Radiolaires du Jurassique moyen et supérieur de Sicile (Italie). *12^e Réunion Annuelle des Sciences de la Terre, Société Géologique de France*, Abstracts, Lille: 60.
- Kito N., De Wever P., Danielian T. & Cordey F. 1990. — Middle to Late Jurassic Radiolarians from Sicily (Italy). *Marine Micropaleontology*, Amsterdam 15:329-349.
- Kling S. A. 1978. — Radiolaria: 203-244, in Haq B. U., Boersma A. (eds), *Introduction to Marine Micropaleontology*. Elsevier, New York.
- 1979. — Vertical distribution of Polycystine Radiolarians in the Central North Pacific. *Marine Micropaleontology*, Amsterdam 4: 295-318.
- 1982. — Radiolarians from the Mariana Trough and Trench region: Deep Sea Drilling Project Leg 60, in Hussong D. M., Uyeda S. et al., *Initial Reports of the Deep Sea Drilling Project*, (U.S. Government Printing Office), Washington 60: 537-555.
- Kobayashi T. 1935. — Contributions to the Jurassic Torinosu Series of Japan. *Japanese Journal of Geology and Geography*, 12: 69-91.
- 1941. — On the improbability of occurrence of the Jurassic Radiolarian chert in the Sambagawa Group. *Proceedings of the Imperial Academy*, Tokyo, XVII, 6: 199-279.
- 1944. — Reciprocal development of Radiolarian rocks as between Asiatic and Australian sides. *Proceedings of the Imperial Academy*, Tokyo, XX, 4: 234-238.
- Kobayashi T. & Kimura T. 1944a. — A study of the radiolarian rocks. *Journal of Faculty of Science, Imperial University, Section 2 (Geology, Mineralogy, Geography, Seismology)*, Tokyo 7 (2): 75-178.
- 1944b. — The Permo-Triassic break in the history of Radiolaria supplemented with the Sambosan-Higashigawa Suite. *Proceedings of the Imperial Academy*, Tokyo, XX, 4: 239-243.
- Kocher R. N. 1981. — Biochronostratigraphische untersuchungen oberjurassischer radiolatiert führender gesteine, insbesondere der sudalpen. *Dissertation of Eidgenössischen Technischen Hochschule Nr 6809*, Zürich, 185 p.
- Koike T. & Takashima K. 1983. — Stratigraphy and geologic structure of the Paleozoic-Mesozoic rocks in the upper-reach area of the Kuriugawa, Minamisaku-gun, Nagano Prefecture. *Memoirs of the Institute Field Education, Yokohama National University*, Yokohama 1: 9-18 [in Japanese].
- Koike T., Igo H. & Kinoshita T. 1974. — Geological significance of the unconformity between the Permian Nabeyama and Triassic Adoyama Formations in the vicinity of Kuzuu, Tochigi Prefecture. *Journal of Geological Society of Japan*, Tokyo, 80, 7: 293-306.
- Kojima S. 1982. — Some Jurassic, Triassic and Permian Radiolarians from the Eastern part of Takayama City, Central Japan. *News of Osaka Micropaleontologists*, Special Volume, Osaka 5: 81-91 [in Japanese with English abstract].
- 1989. — Mesozoic Ferrane accretion in Northeast China, Sikhote-Alin and Japan regions. *Palaeogeography Palaeoclimatology Palaeoecology*, Amsterdam 69: 213-232 [in English].
- Kojima S. & Mizutani S. 1987. — Triassic and Jurassic Radiolaria from the Nandanhada Range, Northeast China. *Transactions and Proceedings of Palaeontological Society of Japan*, Tokyo, N. S., 148: 256-275 [in English].
- Kolar-Jurkovek T. 1989. — New radiolaria from the Ladinian substage (Middle Triassic) of Slovenia (NW Yugoslavia). *Neues Jahrbuch für Geologie und Paläontologie, Monatshefte*, Stuttgart 3: 155-165.
- Kozlova G. E. 1971. — On the Occurrence of Radiolarians in the Lower Kimmeridgian Deposits of the Timano-Uralisk Area. *Transactions of Academy of Sciences, VNIIGRI*, Leningrad, 21, n° 5: 1175-1177.
- 1973. — New Early Kimmeridgian radiolarian species from the Timan-Ural region, in New species of old plants and invertebrates from the USSR. *Trudy VNIIGRI*, Nedra, Moscow, volume 318: 57-60.
- 1976. — Late Volgian radiolarians from the USSR North. *VNIIGRI Reports*, issue 388: 79-83 [in Russian].
- 1983. — Radiolarian assemblages of the Boreal Lower Paleocene: 30-43 [in Russian], in *Significance of the microfauna in studies on continental and marine sediments*. Nauka, Leningrad.

- 1993. — Mesozoic radiolarian assemblage of the Timan-Pechora oil field. *Proceeding of the St-Petersburg International Conference*: 60-75 [in Russian].
- 1994. — Radiolarian marker horizons for the Mesozoic of the Peclora Basin and Barents shelf. *Abstracts of INTERRAD VII*, Osaka: 69.
- Kozlova G. E. & Gorbovets A. N. 1966. — Radiolyarii verkhnemelovyykh i verkhneocenovyykh otlozhenii Zapadno-Sibirskoi nizmenosti [On the Radiolarians of the Upper Cretaceous and Upper Eocene deposits of the Western-Siberian Lowland]. *Trudy Vsesoyuznogo Nefryanogo Nauchno-Issledovatel'skogo Geologorazvedochnogo Instituta (VNIGRI) [Transactions of VNIGI]*, Nedra, Leningrad 248: 3-119.
- Kozur H. 1979. — *Pessagnosaturnalis* n.gen. eine neue Gattung der Saturnalidae Deffandre, 1953 (Radiolaria). *Zeitschrift fuer Geologische Wissenschaften*, Berlin, 7, 5: 669-672 [in German].
- 1984a. — New Biostratigraphical Data from the Bükk, Uppony and Mecsek Mountains and their tectonic implications. *Acta Geologica Hungarica, Akademiai Kiado*, Budapest 27 (3-4): 307-319.
- 1984b. — New radiolarians taxa from the Triassic and Jurassic. *Geologisch-Paläontologische Mitteilungen*, Innsbruck 13 (2): 49-88.
- 1984c. — Some new stratigraphical and paleogeographical data in the Paleozoic and Mesozoic of the Pannonian median massif and adjacent areas. *Acta Geodætica, Geophysica et Montanistica Hungary*, Budapest 19 (1-2): 93-106.
- 1984d. — The Triassic radiolarians genus, *Triassocerucella* gen. nov. and the Jurassic *Hagiastrium* Haeckel, 1882. *Journal of Micropalaeontology*, London 3 (1): 33-35.
- 1984e. — Jurassic radiolarians from the Bükk Mountains and some remarks on the tectonic position of the area. *Acta Geologica Hungarica, Akademiai Kiado*, Budapest 5: 643-652.
- 1985. — The radiolarian genus *Boxitus* n. gen. from the Unuma *echinatus* zone (Bajocian) of northern Hungary. *Proceedings of the Koninklijke Nederlandse Akademie van Wetenschappen-Palaeontology*. Amsterdam, B 88 (2): 211-220.
- 1988. — Main Events in the Development of Middle and Upper Triassic Radiolaria, in Schmidt-Effing R. & Braun A. (eds), First International Conference on Radiolaria (EURO-RAD V), 21 to 24 July 1988, (abstract). *Geologica et Palaeontologica*, Marburg: 23.
- Kozur H. & Krahl J. 1984. — Erster Nachweis triassischer Radiolaria in der Phyllit-Gruppe auf der Insel Kreta [First evidence of Triassic Radiolaria in the Phyllir Group on Crete Island], *Neues Jahrbuch fur Geologie und Paläontologie Monatshefte*, Stuttgart 7: 400-404.
- Kozur H. & Mock R. 1973. — Zum Alter und zur tektonischen Stellung der Meliara-Serie des Slowakischen Karstes. *Geologicky Zbornik Geologica carpathica*, Bratislava 24 (2): 365-374.
- 1985. — Erster Nachweis von Jura in der Meliara-Einheit der Südlichen Westkarpaten. *Geologisch-Palaeontologische Mitteilungen*, Innsbruck, 13, 10: 223-238.
- Kozur H. & Mostler H. 1972. — Beiträge zur Erforschung der mesozoischen Radiolarien. Teil I: Revision der Oberfamilie Coccodiscacea Haeckel 1862, emend. und Beschreibung ihrer triassischen Vertreter. *Geologisch-Paläontologische Mitteilungen*, Innsbruck, 2, 8/9: 1-60.
- 1978. — Beiträge zur Erforschung der mesozoischen Radiolarien. Teil II: Oberfamilie Trematodiscacea Haeckel, 1862, emend. Und Beschreibung ihrer triassischen Vertreter. *Geologisch-Paläontologische Mitteilungen*, Innsbruck 8: 123-182.
- 1979a. — Beiträge zur Erforschung der mesozoischen Radiolarien Teil III: Die Oberfamilien Actinommacea Haeckel, 1862 emend., Arriscacea Haeckel, 1882, Multiarriarctusellacea nov. der Spumellaria und Triassic Nassellaria. *Geologisch-Paläontologische Mitteilungen*, Innsbruck, S, 9, 1/2: 1-132.
- 1979b. — Eine neue Radiolariengattung aus dem höheren Cordevol (Unterkarn) von Götting (Osterreich). *Geologisch-Paläontologische Mitteilungen*, Innsbruck, 9, 4: 179-181.
- 1981. — Beiträge zur Erforschung der mesozoischen Radiolarien. Teil IV: Thalassosphaeracea Haeckel, 1862, Hexastylacea Haeckel, 1882 emend, Perrushevskaya, 1979, Sponguracea Haeckel, 1862 emend. und weitere triassische Lithocycliacea, Trematodiscacea, Actinommacea und Nassellaria. *Geologisch-Paläontologische Mitteilungen*, Innsbruck: 1-208.
- 1983. — The polyphyletic origin and the classification of the Mesozoic Saturnalids (Radiolaria). *Geologisch-Paläontologische Mitteilungen*, Innsbruck, 13, 1: 1-47.
- 1984. — Systematical review of the up to now described Triassic Radiolarians, in Petrushevskaya M. G. & Stepanjants S. D. (eds), Morphology, Ecology and Evolution of radiolarians. *Proceedings of the Fourth EuroRad Conference, 15-19 October, Academy of Science*, Leningrad: 114-123 [in Russian].
- 1986. — Earliest Archaeodictyomitra species from the Unuma *echinatus* Zone of Northern Hungary. *Geologisch-Palaeontologische Mitteilungen*, Innsbruck, 13, 11: 257-275.
- 1989. — Radiolarien und Schwammskleren aus dem Unterperm des Vorurals. *Geologisch-Palaeontologische Mitteilungen*, Innsbruck 2: 147-275, 25 pls.
- Krasnyi et al. 1962. — O svyazi razvitiya organizmov s kremnievym skelotom (Radiolyarii Diatomei) s tektonicheskimi i vulkanicheskimi protsessami (na primere severo-zapadnoi chasti tikho okeanskogo

- poyasa) [Correlations between the development of organisms with a siliceous skeleton (radiolarians and diatoms) and the tectonic and volcanic events (after the example of the NW Pacific Ocean belt)]. *Znachenie Biosferi v Geologicheskikh Protssakh, Voprosy Vzaimosvyazi Palaontologii i Tektoniki, Trudy 5 i 6 sessii Vsesoyuznogo Paleontologicheskogo Obshchestva*: 171-182.
- Kraus (or Krauss) H. 1914. — Geologische Ausnahme des Gebietes zwischen Reichenhall und Melleck. *Geognostische Jahreshefte* 1913: 105-154.
- Kurimoto C. 1982. — "Chichibu System" in the area Southwest of Koyasan, Wakayama Prefecture - Upper Cretaceous Hanazono Formation. *Journal of the Geological Society of Japan*, Tokyo, 88, 11: 901-914 [in Japanese with English abstract].
- Lahm B. 1984. — Spumellarienfaunen (Radiolaria) aus den mitteltriassischen Buchensteiner-Schichten von Recoaro (Norditalien) und den obertriassischen Reiflingerkerlken von Grossreifling (Osterreich). *Systematik, Stratigraphie. München Geowissenschaftliche Abhandlungen*, München, A 1: 1-161.
- Leischner W. 1961. — Zur Kenntnis der Mikrofauna und -flora der Salzburger Kalkalpen. *Neues Jahrbuch für Geologie und Palaontologie Abhandlungen*, 112: 1-47.
- Leong K. M. 1975. — New ages from radiolarian cherts of the Chert-Spilitite Formation, Sabah. *Warta Geologi, Kuala Lumpur*, 1, 5: 26-28.
- Levykina I. E. 1984. — On the scale of the changings of the Radiolarians Assemblages, in Petrushevskaya M. G. & Stepanjanis S. D. (eds), *Morphology, Ecology and Evolution of Radiolarians, Proceedings of the Fourth Eurorad Conference, 15-19 October, Academy of Science, Leningrad*: 233-238 [in Russian].
- Li H. S. 1986. — Upper Jurassic (Early Tithonian) Radiolarians from Southern Bangong Lake, Xizang. *Acta Micropalaontologica Sinica*, Beijing, 3, 8: 311-316.
- 1988. — Early Jurassic (Late Pliensbachian) Radiolaria from the Dengqen area, Xizang (Tibet). *Acta Micropalaontologica Sinica*, Beijing 5 (3): 328-330 [in English].
- Lipman R. Kh. 1952. — Materialy k monograficheskomu izucheniyu radiolyarii i verkhnemelovykh otlozhenii Russkoi Platformy [Data on the monographic study of the radiolarian of the Upper Cretaceous deposits of the Russian platform]. *Trudy Vsesoyuznogo Nauchno-Issledovatel'skogo Geologicheskogo Instituta (VSEGEI), Paleontologiya i Stratigrafiya*, Moscow: 24-51.
- 1953. — Novye dannye o radiolyariyakh Dalnego Vostoka [New data on the Radiolarians of the Far East]. *Trudy Vsesoyuznogo Nauchno-Issledovatel'skogo Geologicheskogo Instituta (VSEGEI), Paleontologiya i Stratigrafiya*: 126-147.
- 1960. — Stratigrafiya i fauna melovykh otlozhenii Zapadno-Sibirskoinizmennosti. Podklass Radiolaria. *Trudy Vsesoyuznogo Nauchno-Issledovatel'skogo Geologicheskogo Instituta (VSEGEI)* 29: 124-133, 292-305.
- 1961. — Itogi izucheniya pozdneemelovykh i paleogenovykh radiolyarii zapadno-sibirskoi nizmennosti, russkoi platformy i srednei aziy [Conclusions of the study of late Cretaceous and Paleogene radiolarians from the Western Siberian Lowlands, The Russian Platform and Central Asia]. *Vsesoyuznoe Paleontologicheskoe Obshchestvo, Sorok Let Paleontologii 1917-1957, Trudy 4th session*: 41-46.
- 1962. — Pozdneemelovye radiolyarii Zapadno-Sibirskoi nizmennosti i Turgaiskogo progiba. Materialy po stratigrafii mezo-kainozoya Turgaiskogo progiba, severnogo Priaralya i Zapadno-Sibirskoinizmennosti [Late Cretaceous radiolarians of the Western Siberian Lowland and the Turgaisk trough. Material on the Stratigraphy of the Meso- Cenozoic of the Turgaisk Trough, Northern Pre-Aral and the Western Siberian Lowland]. *Trudy Vsesoyuznogo Nauchno-Issledovatel'skogo Geologicheskogo Instituta (VSEGEI)*, Moscow 77: 271-321.
- 1975b. — Stages of the development of late Cretaceous and Paleogene radiolarians and their significance for intercontinental correlation. *Reports Conference*: 68-70, 86-88.
- 1976. — Fourth all-union seminar on radiolarians. *Paleontologic Journal, Moscow Academy of Science, USSR*, Moscow 2: 148-450.
- 1979a. — *Manual for study of fossil Radiolarians*. Nedra, Moscow, 256, 122 p. [in Russian].
- 1979b. — Znachenie radiolyarii dlia razrabotki zonalnoy chkal paleogena jaura URSS [Importance of Radiolarians for a jurassic-Paleogene biostratigraphic scale], in *Plankton i organicheskii mirpelagiala b istorii zemli, Nauka Reports of the 19th paleontological Meeting*, Leningrad.
- Lipman R. Kh. & Boyanov I. 1976. — Nizhnemelovye radiolyarii v Vostochnykh Rodopakh Bolgarii [Lower Cretaceous radiolarians of the Eastern Rhodopes of Bulgaria]. *Bulgarska Akademiya na Naukite, Paleontologiya, Stratigrafiya i Litologiya*, Sofia 4: 37-46.
- Lisitzin A. P. 1971. — Distribution of siliceous microfossils in suspension and in bottom sediments: 173-195, in *Funnel B. M. & Riedel W. R. (eds), The Micropaleontology of Oceans*, Cambridge University Press.
- Lombard A. & Schröder W. J. 1939. — Faciès peu connus du Crétacé Supérieur des Préalpes médianes. *Archives Sciences Physiques et Naturelles*, Genève, 5^e per., volume 21 : 76-79.
- Lombardi G.-A. & Bowden G. 1982. — Paleobiogeography and diversity of radiolaria: Recent vs. Miocene. *Geological Society of America Abstract of the 95th Annual meeting*: 548-549.

- Lozynyak P. Yu. 1969. — Radiolyarii nizhnemelovykh otlozhenii Ukrainskikh Karpat [The radiolarians of the Lower Cretaceous deposits of the Ukrainian Carpathians], in *Iskopaemye i Sovremennyye Radiolyarii: Materialy vtorogo vsesoyuznogo seminara po radiolyariyam [Fossil and Recent Radiolarians: Materials of the Second All Union Seminar on Radiolarians]*: 29-41.
- 1975. — Nekotorye radiolyarii melovykh otlozhenii Skibovoi zony Ukrainskikh Karpat (Some radiolarians in Cretaceous beds of the Skiba-zone of Ukrainian Carpathians). *Paleontologicheskii Sbornik. Izdatel'skoe Obedinenie "VishebaShkola". Lvovskom Godudarstvennom Universitete [Paleontological Collection of Articles, parts 1 and 2, Visheba Shkol, Lvov State University, Lvov, parts 1 & 2, 12: 48-53.*
- 1981. — Jurassic Radiolarians from the Massive of Marmoroskovo (Carpathians of Ukraine), in Krashcheninikov V. A. (ed.), *Sistematika, Evolyutsiya i Stratigraficheskoe Radiolyarii [Systematic, Evolution and Stratigraphic Importance of radiolarians]*, Academy of Sciences of USSR, Nauka, Moscow: 60-72 [in Russian].
- Macleod N. 1988. — Lower and Middle Jurassic Perispyridium (Radiolaria) from the Snowshoe Formation, east-central Oregon. *Micropaleontology*, New York 34 (4): 289-315.
- Magne J. & Sigal J. 1953. — Sur la position stratigraphique d'un niveau-repère à Radiolaires (Albien élevé et Vraconien) en Algérie. *Bulletin de la Société géologique de France*, Paris 6 (3) : 345-354.
- Manivit H., Azema J., Galbrun B. & De Wever P. 1986. — Biostratigraphic study of Calpionellids and Nannofossils in the tethyan realm (Spain, Sicily, SE France) in Late Jurassic and Berriasian time: A correlation with magnetostratigraphic results, *Acta Geologica Hungarica*, Budapest 29 (1-2): 105-123.
- Marcucci M., Conti M. & Spadea P. 1987. — Radiolarian association in cherts from Timpa Delle Murge (Lucanian Appennine, Italy). *Osioliti*, Bologna 12 (2): 411-414.
- Marcucci Passerini M., Bertini P., Dainelli J. & Sirugo A. 1988. — The "Bonarelli Horizon" in the Central Appennine: Radiolarian Biostratigraphy, in Schmidt-Effing R. & Braun A. (eds), First International Conference on Radiolaria (EURO-RAD V). 21 to 24 July 1988 (abstract), *Geologica et Palaeontologica*, Marburg: 24.
- Martin *et al.* 1915. — Geology and mineral resources of Kenai Peninsula, Alaska. *U.S. Geological Survey Bulletin* No. 587, 243 p.
- Matsuda T. & Isozaki Y. 1982. — Radiolarians around the Triassic-Jurassic boundary from the bedded chert in the Kamiaso Area, Southwest Japan. Appendix: "Anisian" Radiolarians. *News of Osaka Micropaleontologists*, Special Volume, Osaka 5: 93-101 [in Japanese with English abstract].
- Matsuoka A. 1982a. — Jurassic two-segmented Nassellarians (Radiolaria) from Shikoku, Japan. *Journal of Geoscience, Osaka City University*, Osaka, art. 5, 25: 71-86.
- 1982b. — Middle and Late Jurassic Radiolarian Biostratigraphy in the Sawaka and the Niyodo Areas, Kochi Prefecture, Southwest Japan. *News of Osaka Micropaleontologists*, Special Volume, Osaka 5: 237-253 [in Japanese with English abstract].
- 1983a. — Middle and Late Jurassic Radiolarian Biostratigraphy in the Sakawa and Adjacent areas, Shikoku, Southwest Japan. *Journal of Geosciences, Osaka City University*, Osaka 26, 1: 1-48.
- 1983b. — The conformable relationship between chert beds and clastic beds in the Triassic-Jurassic sequence of the Southern subbelt of the Chichibu Belt, Kochi Prefecture. *Journal of the Geological Society of Japan*, Tokyo, 89, 7: 407-410.
- 1984a. — Late Jurassic Four-Segmented Nassellarians (Radiolaria) from Shikoku, Japan. *Journal of Geosciences, Osaka City University*, Osaka, 27, 5: 143-153.
- 1984b. — Togano Group of the southern Chichibu Terrane in the western part of Kochi Prefecture, southwest Japan. *Journal of the Geological Society of Japan*, Tokyo, 90, 7: 455-477 [in Japanese with English abstract].
- 1985a. — Jurassic Radiolarian Biostratigraphy in Japan. *EuroRad IV, Leningrad October 15 to 19, 1984 - Fourth International Meeting of Radiolarists organized by EuroRad - Radiolaria*, Paris 9: 64.
- 1985b. — Middle Jurassic Keta Formation of the southern part of the Middle Chichibu Terrane in the Sakawa area, Kochi Prefecture, Southwest Japan. *Journal of the Geological Society of Japan*, Tokyo, 91, 6: 411-420.
- 1986a. — Faunal change of radiolarians around the Jurassic-Cretaceous boundary - with special reference to some multi-segmented nassellarians. *Kaseki (Fossil)*, Tokyo 40: 1-15.
- 1986b. — Mesozoic Strata of the Southern Chichibu Terrane in the Tsukumi area, Oita Prefecture. *News of Osaka Micropaleontologists*, Special Volume, Osaka 7: 219-223 [in Japanese with English abstract].
- 1986c. — Stratigraphic distribution of two species of Tricolocapsa in the Hisuikyo Section of the Kamiaso area, Mino Terrane. *News of Osaka Micropaleontologists*, Special Volume, Osaka 7: 59-62 [in Japanese with English abstract].
- 1986d. — Tricolocapsa yaoui Assemblage (Late Jurassic radiolarians) from the Togano Group in Shikoku, South-east Japan. *Journal of Geosciences, Osaka City University*, Osaka, 29, 4: 101-115.
- 1987. — Radiolarian age of the Shiriya Group in Aomori Prefecture, North-East Japan. *Fossils*, Tokyo 42: 7-13.
- 1988. — First appearance biohorizon of Tricolocapsa conexa within Jurassic siliceous mud-

- stone sequences of the Kamiasso area in the Mino Terrane, central Japan - A correlation of radiolarian zones of the middle Jurassic. *Journal of the Geological Society of Japan*, 94, 8: 583-590.
- Matsuoka A. & Yao A. 1985. — Latest Jurassic Radiolarians from the Torinosu Group in South-West Japan. *Journal of Geosciences, Osaka City University*, Osaka, 28, 5: 125-145.
- 1986. — A newly proposed radiolarian zonation for the Jurassic of Japan. *Marine Micropaleontology*, Amsterdam 11: 91-105.
- Matsuyama H., Kumon F. & Nakajo K. 1982. — Cretaceous Radiolarian Fossils from the Hidakagawa Group in the Shimanto Belt, Kii Peninsula, Southwest Japan. *News of Osaka Micropaleontologists*, Special Volume, Osaka 5: 371-382 [in Japanese with English abstract].
- Mattson P. H. & Pessagno E. A. Jr 1979. — Jurassic and early Cretaceous radiolarians in Puerto Rican ophiolite - Tectonic implications. *Geology*, Boulder, 7, 9: 440-444.
- McLaughlin R. J. & Pessagno E. A. Jr 1978. — Significance of age relations above and below upper Jurassic Ophiolite in the Geysers-clear Lake Region, California. *Journal of Research of the U.S. Geological Survey*, Washington DC, 6, 6: 715-726.
- Minoura N., Kumano S., Kito N., Kamada K. & Kato M. 1982. — Lower Cretaceous deposits at Nunobe, Central Hokkaido. *Earth Science (Chikyū Kagaku)*, Tokyo 36: 348-350 [in Japanese].
- Misik M. 1973. — Structures of the chert concretions from the limestones of Tithonian and Neocomian, West Carpathian MTS. *Geologický Zborník-Geologica Carpathica*, Bratislava, XXIV, 1: 141-162.
- Mittermaier K. 1896. — *Beitrag zur Kenntnis der Mikrofauna der oberen Kreideschichten von Transkaukasien*. Inaugural dissertation for Ph. D. Friedrich-Alexanders-Universität, Erlanger, 30 p.
- Mizutani S. 1966. — Transformation of silica under hydrothermal conditions. *Nagoya University, Journal of Earth Sciences* 14: 56-88.
- 1981. — A Jurassic Formation in the Hida-Kanayama Area, Central Japan. *Bulletin of Mizunami Fossil Museum*, Mizunami 8: 147-190 [in Japanese with English description].
- 1987. — Mesozoic Terranes in the Japanese Islands and Neighbouring East Asia. *Geodynamics Series, American Geophysical Union*, Washington 19: 263-273.
- Mizutani S. & Kido S. 1983. — Radiolarians in Middle Jurassic siliceous shale from Kamiasso, Gifu Prefecture, central Japan. *Transactions and Proceedings of the Paleontological Society of Japan. New Series*, Tokyo 132: 253-262.
- Mizutani S. & Koike T. 1982. — Radiolarians in the Jurassic siliceous shale and in the Triassic bedded chert of Unuma, Kagamigahara City, Gifu Prefecture, Central Japan. *News of Osaka Micropaleontologists*, Special Volume, Osaka 5: 117-134 [in Japanese with English abstract].
- Mizutani S., Hattori I., Adachi M., Watika K., Okamura Y., Kido S., Kawaguchi I. & Kojima S. 1981a. — Jurassic Formations in the Mino Area, Central Japan. *Proceedings of Japan Academy*, B, 57, 6: 194-199.
- Mizutani S., Imoto N., Yao A., Ichikawa K., Ishida K., Nakazawa K., Otsuka T., Shimizu D. & Suyari K. 1981b. — Triassic bedded chert and associated rocks in the Inuyama area, Central Japan. *2nd International Conference on Siliceous Deposits on the Pacific Region, I.G.C.P. Japan* 115: 156-210.
- Mizutani S., Nishiyama H. & Ito T. 1982. — Radiolarian biostratigraphic study of the Shimanto Group in the Nanto-Nansei Area, Mie Prefecture, Kii Peninsula, Central Japan. *Journal of Earth Science*, Nagoya University 30: 31-107.
- Mizutani S., Shao J. & Zhang Q. 1990. — The Nadanhada Terrane in relation to Mesozoic tectonics on continental margins of East Asia. *Proceeding of the Japan Academy*, v. 62, serie B, v. 3, No. 1: 337-340.
- Mizutani S., Uemura T. & Yamamoto H. 1984. — Jurassic radiolarians from the Tsugawa Area, Niigata Prefecture, Japan. *Earth Science (Chikyū Kagaku)*, Tokyo, 38, 5: 352-358.
- Moore R. C. 1954. — Treatise on Invertebrate Paleontology, in Moore R. C. (ed.), *Geological Society of America, University Kansas Press*, Lawrence, 3: D1-D163.
- Moore T. C. 1973. — Radiolaria from Leg 17 of the Deep Sea Drilling Project. *Initial Reports of the Deep Sea Drilling Project*, 17: 797-869.
- Murata K. J. & Larson R. R. 1975. — Diagenesis of Miocene siliceous shales, tumbler range, California. *Journal of Research of the United-States Geological Survey* 3: 553-566.
- Murata M., Ohishi A., Nishizono Y., Sato T. & Takehara T. 1982. — Late Mesozoic Radiolarian fauna from the Sakaguchi Formation. *News of Osaka Micropaleontologists*, Special Volume, Osaka 5: 327-337 [in Japanese with English abstract].
- Murphy B. 1984. — Biostratigraphy and lithostratigraphy of chert in the Franciscan Complex, Marin Headlands, California. *Society of Economic Paleontologists and Mineralogists*, Tulsa, Oklahoma 43: 51-70.
- Muzavor S. N. X. 1977. — Die oberjurassische Radiolarienfauna von Oberaudorf am Inn. *Dissertation, Ludwig-Maximilians-Universität, München*: 1-163.
- Nadj I. 1971. — Division of Upper Jurassic deposits of the Mecsek Mountains according to fossil organisms. *Annales Instituti Geologici Publici Hungarici*, LIV, 2: 319-331.
- Nagata K. 1979. — Radiolarian biostratigraphy of the Cretaceous and Tertiary in the central and the south-western parts of Hokkaido. "Exploitation and Development of Oil and Gas Resources in

- Hokkaido, 1968-1976". *Committee of Promotion of mining in Hokkaido*: 178-182 [in Japanese].
- 1982. — Radiolarian Assemblage from the Tsurikake Formation of the Okushiri Island, West Hokkaido. *News of Osaka micropaleontologists*, Special Volume, Osaka 5: 415-421 [in Japanese with English abstract].
- 1986. — On the radiolarian biostratigraphy and the preservation related to silica diagenesis, Atsunai-Toyokoro area, eastern part of Hokkaido, in Recent Progress of Research on Radiolarians and radiolarian Terranes of Japan, *News of Osaka Micropaleontologists*, Special Volume, Osaka 7: 95-108 [in Japanese with English abstract].
- Naka T. & Ishiga H. 1987. — Carboniferous to Jurassic (especially Permian) radiolarians recovered from the chugoku region (a review). *Memoir of Faculty of Science, Shimane University* 21: 153-167.
- Nakagawa C. & Nakaseko K. 1977. — Radiolariaj fosilioj de la Simanto Formaciato (autauanonco). Radiolarian Fossils from Shimanto Group (Preliminary Report): a study of the Shimanto Belt in Eastern Part of Shikoku (N°3). *Journal of Gakugai Tokushima University (Natural Sciences)* Tokushima 28 (3): 17-25 [in Japanese with Esperanto abstract].
- Nakagawa C., Nakaseko K., Kawaguchi K. & Yoshimura R. 1980. — Radiolarian fossils from the Upper Jurassic and Cretaceous formations of the Shimanto Belt in the eastern Part of Shikoku - a study of the Shimanto Belt in the eastern Part of Shikoku (N°4) [Radiolariaj Fosilioj (el Malfrua juraso gis Malfrua Kretaceo) de Norda zono de la Simanto Formaciato (generalas aspekto)]. *Journal of Tokushima University (Natural Sciences)*, Tokushima 31: 1-27 [in Japanese with Esperanto abstract].
- Nakaseko K. 1979a. — On the International correlation by means of Radiolarians from the Cretaceous Formations in Japan. *Kaseki (Fossils)*, Tokyo 29: 27-35 [in Japanese].
- 1979b. — Some Problems on the geohistory of Japanese Islands by means of Radiolarian Fossils. *News of Osaka Micropaleontologists*, Osaka 7: 19-26 [in Japanese].
- 1981. — Mesozoic Radiolarians in Southwest Japan, in Baumgartner P. O., Bjorklund K. R., Caulet J.-P., De Wever P., Kellogg D., Labracherie M., Nakaseko K., Nishimura A., Schaaf A., Schmidt-Effing R. & Yao A., EuroRad II, 1980 - Second European Meeting of Radiolarian Paleontologists: Current Research on Cenozoic and Mesozoic Radiolarians, *Eclogae Geologicae Helvetiae*, Basel 74: 1027-1061.
- Nakaseko K. & Nishimura A. 1979a. — New information on Radiolarian Fossils from the Shimanto Group. *News of Osaka Micropaleontologists*, Osaka 7: 27-47 [in Japanese].
- 1979b. — Upper Triassic Radiolaria from Southwest Japan. *Science Reports, Osaka City University*, Osaka 28, 2: 61-109.
- 1980. — Upper Triassic Radiolaria from Southwest Japan. *Science Report, College of General Education, Osaka University*, Osaka, 28, 2: 61-109.
- 1981. — Upper Jurassic and Cretaceous Radiolaria from the Shimanto Group in Southwest Japan. *Science Report, College of General Education, Osaka University*, Osaka, 30, 2: 133-203.
- Nakaseko K., Iwamoto H. & Takahashi K. 1965. — Radiolarian Stratigraphy in the oil and gas bearing Tertiary and Upper Cretaceous Formations, Japan. *Contributions of Government of Japan Economic Commission for Asia and the Far East Third Petroleum Symposium, Tokyo, November 1965*, Tokyo: 1-14.
- Nakaseko K., Matsushima N., Obata I. & Matsukawa M. 1979a. — Geological age of the Misakubo and the Wada Formations in the Akashi Mountains. *Memoirs of the National Science Museum*, Tokyo 12: 65-72 [in Japanese with English abstract].
- Nakaseko K., Mizutani S. & Yao A. 1983. — Radiolarian fossils and Mesozoic Geology of the Japanese Islands. *Kagaku (Science)* 53: 177-183 [in Japanese].
- Nakaseko K., Nishimura A. & Sugano K. 1979b. — Cretaceous Radiolaria in the Shimanto Belt, Japan. *News of Osaka Micropaleontologist*, Special volume, Osaka 2: 1-49.
- Nakazawa K., Kumon F., Kimura K., Mitsuyama H. & Nakajo K. 1983a. — Environment of Deposition of Cretaceous Chert from the Shimanto Belt, Kii Peninsula, Southwest Japan, in Iijima A., Hejn J. R. & Siever R. (eds). Siliceous deposits in the Pacific Region, *Developments in Sedimentology*, Elsevier, Amsterdam 36: 395-411.
- Nakazawa K., Mitsuyama H. & Kumon F. 1983b. — Stratigraphy and formation mechanism of olistostromes in the Shimanto Belt. *Marine Science Monthly*, 15, 8: 448-452 [in Japanese].
- Nauss A. W. 1947. — Cretaceous microfossils of the Vermilion area, Alberta. *Journal of Paleontology*, 21: 329-343.
- Nazarov B. B. & Ormiston A. R. 1993. — New biostratigraphically important Paleozoic Radiolaria of Eurasia and North America, in Blueford J. R. & Murchey B. L. (eds), Radiolaria of giant and sub-giant fields in Asia, *Nazarov Memorial volume, Micropaleontology Press*, Special Publication, volume 6, American Museum of Natural History, New York: 22-60.
- Neviani A. 1900. — Supplemento alla fauna a Radiolari delle rocce mesozoiche del Bolognese. *Bollettino della Societa geologica italiana*, Roma, 19: 645-671.
- 1901. — Nuovi generi e sottogeneri di radiolari e briozoi fossili italiani. *Bollettino della Societa zoologica italiana*, Roma, II, 10, I et II: 41-43.
- Nishimura H. 1986. — A preliminary report on

- growth of radiolarian shells, in *Recent Progress of Research on Radiolarians and radiolarian Terranes of Japan. News of Osaka Micropaleontologists, Special Volume, Osaka 7: 157-165* [in Japanese with English abstract].
- Nishizono Y. & Murata M. 1983. — Preliminary studies on the sedimentary facies and Radiolarian Biostratigraphy of Paleozoic and Mesozoic sediments, exposed along the mid-stream of the Kuma River, Kyushu, Japan. *Kumamoto Journal of Science, Geology, Kumamoto*, 12, 2: 1-40 [in Japanese with English abstract].
- Nishizono Y., Ohishi A., Sato T. & Murata M. 1982. — Radiolarian fauna from the Paleozoic and Mesozoic Formations distributed along the mid-stream of Kuma River, Kyushu, Japan. *News of Osaka Micropaleontologists, Special Volume, Osaka 5: 311-326* [in Japanese with English abstract].
- Noble P. & Renne P. R. 1988. — Paleoenvironmental and Biostratigraphic Significance of Siliceous Microfossils from Permo-Triassic Rocks of the Redding Section, Eastern Klamath Mountains, California, in Schmid-Effing R. & Braun A. (eds), First International Conference on Radiolaria (EURORAD V), 21 to 24 July 1988 (abstract), *Geologica et Palaeontologica, Marburg*: 28.
- Obradovic J. & Gorican Š. 1989. — Siliceous deposits in Yugoslavia: Occurrences, types and ages, in Hein J. R. & Obradovic J. (eds), *Siliceous deposits of the Tethys and Pacific Regions*. Springer, New York: 51-64.
- O'Dogherty L. 1994. — Biochronology and Paleontology of Mid-Cretaceous Radiolarians from Northern Apennines (Italy), and Betic Cordillera (Spain). *Mémoires de Géologie, Lausanne*, 21, 415 p.
- Okada H., Ando K. & Nakaseko K. 1982. — Discovery of Aptian Radiolarian fauna from the Kumaneshiri Group, Hokkaido. *News of Osaka Micropaleontologists, Special Volume, Osaka 5: 359-360* [in Japanese with English abstract].
- Okamura M. 1981. — Radiolarian fossils from the Northern Shimanto Belt (Cretaceous) in Kochi Prefecture: 153-178 [in Japanese with English abstract], in Iwata A. & Tashiro M. (eds), *Geology and Paleontology of the Shimanto Belt, Selected Papers in Honor of Prof. Jiro Katto*. Rinyakosaitai Press, Kochi.
- Okamura M. & Matsugi H. 1986. — Cretaceous radiolarians from the time equivalent formations of arc-trench system, Shikoku, in *Recent Progress of Research on Radiolarians and radiolarian Terranes of Japan. News of Osaka Micropaleontologists, Special Volume, Osaka 7: 117-129* [in Japanese with English abstract].
- Okamura M. & Uto H. 1982. — Notes on stratigraphic distributions of Radiolarians from the Lower Cretaceous sequence of chert in the Yokonami Melange of Shimanto Belt, Kochi Prefecture, Shikoku. *Research Reports of Kochi University, Natural Science, Kochi* 31: 87-94 [in Japanese with English abstract].
- Okamura M., Nakaseko K. & Nakano K. 1982. — Radiolarians from the Kajisako Formation, Monobe area, Shikoku. *Multidisciplinary Research on Upper Cretaceous Monobe Area, Shikoku. Paleontological Society of Japan, Special Papers, Tokyo* 25: 93-102.
- Okimura Y., Suzuki S., Fujita H. & Yoshida Y. 1986. — A preliminary report on the Mesozoic Radiolarians from the Kurakake-roge Formation and the Ikuridani Group of the Suzuka Mountains, in *Recent Progress of Research on Radiolarians and radiolarian Terranes of Japan. News of Osaka Micropaleontologists, Special Volume, Osaka 7: 181-185* [in Japanese with English abstract].
- Origlia-Devos I. 1983. — *Radiolaires du Jurassique supérieur-Crétacé inférieur: Taxonomie et révision stratigraphique (Zone du Pinde-Olanos, Grèce; Zone de Sciacca, Italie; Complexe de Nicoya, Costa Rica et forages du DSDP)*. Thèse 3ème cycle, Université Pierre et Marie Curie, Paris 6, 83-53: 1-328.
- Ormiston A. R. 1993. — The association of radiolarians with hydrocarbon source rocks. *Micropaleontology Press, Special Publication No. 6*, New York: 9-16.
- Otsuka T. 1986. — Deformation of the Mesozoic strata in the Northeastern part of Mino-Ryoke Terrane, Nagano Prefecture, central Japan, in *Recent Progress of Research on Radiolarians and radiolarian Terranes of Japan. News of Osaka Micropaleontologists, Special Volume, Osaka 7: 187-196* [in Japanese with English abstract].
- Owada K. & Saka Y. 1982. — Preliminary note on the Paleozoic and the Mesozoic Formations in the Chichibu Belt, Okutama District, Kwanto Mountains, Japan. *News of Osaka Micropaleontologists, Special Volume, Osaka 5: 67-80* [in Japanese with English abstract].
- Ozoldova L. 1975. — Upper Jurassic Radiolarians from the Kysuca Series in the Klippen Belt. *Zapadne Karpaty, série Paleontologia, Bratislava* (1): 73-86.
- 1979a. — Radiolarians from Rudina Beds of the Kysuca Series in the Klippen Belt from Locality Produo. *Annotationes Zoologicae et Botanicae, Bratislava* 128: 1-15.
- 1979b. — Radiolarian assemblage of radiolarian cherts at Podbiel locality (Slovakia). *Casopis pro mineralogii a geologii, Bratislava* 24 (3): 249-261.
- 1988. — Radiolarian associations from Radiolarites of the Kysuca Succession of the klippen belt in the vicinity of Myjama - Tura Luka (West Carpathians). *Geologický Zborník - Geologica Carpathica, Bratislava* 39 (3): 369-392.
- Ozoldova L. & Petterakova M. 1987. — Biostratigraphic research of Upper Jurassic limestones of the Cachtice Carpathians (locality Bzince

- pod Javorinou). *Karpaty, série paleontologia*, Bratislava 12: 115-124.
- Ozoldova I. & Sykora M. 1984. — The Radiolarian assemblage from Čachtické Karpaty Mts Limestones (the locality Sipkovsky Haj). *Geologický Zborník Geologica Carpathica*, Bratislava 35 (2): 259-290.
- Palmer D. K. 1934. — The occurrence of fossil Radiolaria in Cuba. *Memorias de la Sociedad Cubana de Historia Natural*, 8, n° 2: 77-82.
- Pantaneli D. 1880. — I diaspri della Toscana e i loro fossili. *Atti della reale Accademia nazionale dei Lincei. Memorie della Classe di Scienze fisiche, matematiche e naturali*, n° 8: 35-66.
- 1887-1889. — Radiolarie dei diaspri. *Atti della società Toscana di Scienze Naturali, Processi Verbali*, 6: 11-12.
- Parona C. F. 1890. — Radiolarie nei noduli selciosi del calcare giurese di Cittiglio presso Laveno [Radiolarians from siliceous nodules of the Jurassic limestones of Cittiglio near Laveno]. *Bollettino della Società geologica italiana*, vol. IX, fasciolo 1: 132-175.
- 1892. — Sugli schisti silicei a radiolarie di Cesana presso il Monginevra. *Atti della Accademie delle Scienze di Torino*, 27: 305-319.
- Pavšic J. & Gorican S. 1987. — Lower Cretaceous Nanoplankton and Radiolaria from Vrsnik (Western Slovenia). Spodnjekredni Nanoplankton in Radiolarji iz Vrsnika (Zahodna Slovenija). *Razprave IV. Razreda Sazu*, Ljubljana, XXVII, 2: 15-36 [in English].
- Payne M. B. 1962. — Type Panoche group (Upper Cretaceous) and overlying Moreno and Tertiary strata on the west side of the San Joaquin Valley. *California Division of Mines and Geology, Bulletin* 181: 165-175.
- Perner J. 1891. — O radiolárních z českého útvaru křídového [On radiolarians from Czech Cretaceous system]. *Rozprawy třídy mathematicko-přirodovedcké Vestník Kralovské české společnosti nauk*: 255-269.
- Pessagno E. A. Jr 1960. — Stratigraphy and micropaleontology of the Cretaceous and lower Tertiary of Puerto Rico. *Micropaleontology*, 6 (1): 87-110.
- 1962. — The Upper Cretaceous stratigraphy and micropaleontology of south-central Puerto Rico. *Micropaleontology*, 8 (3): 349-368.
- 1963. — Upper Cretaceous Radiolaria from Puerto Rico. *Micropaleontology*, 9 (2): 197-214.
- 1969a. — Mesozoic planktonic Foraminifera and Radiolaria, in Ewing M., Würzel J. L. et al. *Biostratigraphy. Initial Reports of the Deep Sea Drilling Project*, (U.S. Government Printing Office), Washington 1: 607-621.
- 1969b. — The Neosciadiocapsidae, a new family of Upper Cretaceous Radiolaria, *Bulletins of American Paleontology*, Ithaca, Lawrence, 56, 253: 377-439.
- 1970. — The Rotaformidae, a new family of Upper Cretaceous Nassellariina (Radiolaria) from the Great Valley Sequence, California Coast Ranges. *Bulletins of American Paleontology*, Ithaca, Lawrence, 58, 257: 5-33.
- 1971a. — A new radiolarian from the Upper Cretaceous of the California Coast Ranges. *Micropaleontology*, New York 17 (3): 361-364.
- 1971b. — Jurassic and Cretaceous Hagiastriidae from the Blake-Bahama Basin (site 5A, JOIDES Leg 1) and the Great Valley Sequence, California Coast Ranges. *Bulletins of American Paleontology*, Ithaca, Lawrence, 60, 264: 1-83.
- 1972. — Cretaceous Radiolaria. Part I: The Phaseliformidae, new family, and other Spongodiscacea from the Upper Cretaceous portion of the Great Valley Sequence. Part II: Pseudoaulophacidae Riedel from the Cretaceous of California and the Blake-Bahama Basin (JOIDES Leg 1). *Bulletins of American Paleontology*, Ithaca, Lawrence, 61, 270: 269-314.
- 1973. — Upper Cretaceous Spumellariina from the Great Valley Sequence, California Coast Ranges. *Bulletins of American Paleontology*, Ithaca, Lawrence, 63, 276: 49-102.
- 1975. — Upper Cretaceous Radiolaria from Deep Sea Drilling Project Site 275, in Kennett J. P., Houtz R. E. et al., *Initial Reports of the Deep Sea Drilling Project*, (U.S. Government Printing Office), Washington XXIX: 1011-1029.
- 1976. — Radiolarian zonation and stratigraphy of the Upper Cretaceous portion of the Great Valley Sequence, California Coast Ranges. *Micropaleontology Press, Special Publication*, New York 2: 1-95.
- 1977a. — Upper Jurassic Radiolaria and Radiolarian biostratigraphy of the California Coast Ranges. *Micropaleontology*, New York 23 (1): 56-113.
- 1977b. — Lower Cretaceous Radiolarian biostratigraphy of the Great Valley Sequence and Franciscan Complex, California Coast Ranges. *Cushman Foundation Foraminiferal Research, Special Publication*, Washington 15: 5-87.
- 1977c. — Radiolaria in Mesozoic Stratigraphy, in Ramsay A. T. S. (ed.), *Oceanic Micropaleontology*, Academic Press, London, New York 2: 913-950.
- Pessagno E. A. Jr & Blome C. D. 1980. — Upper Triassic and Jurassic Pantaneliinae from California, Oregon and British Columbia. *Micropaleontology*, New York 26 (3): 225-273.
- 1982. — Bizarre Nassellariinae (Radiolaria) from the Middle and Upper Jurassic of North America. *Micropaleontology*, New York 28 (3): 289-318.
- 1986. — Faunal affinities and tectonogenesis of Mesozoic rocks in the Blue Mountains Province of Eastern Oregon and Western Idaho, in Vallier T. L. & Brooks H. C. (eds), *Geology of the Blue Mountains Region of Oregon, Idaho and Washington: Biostratigraphy and Paleontology*,

- Geological Survey Professional Paper (U.S. Government Print Office)*, Washington.
- Pessagno E. A. Jr, Finch W. & Abbott P. L. 1979. — Upper Triassic Radiolaria from the San Hipolito Formation, Baja California. *Micropaleontology* 25 (2): 160-197.
- Pessagno E. A. Jr & Longoria T. J. F. 1973. — Mesozoic Foraminifera. Leg 15, Deep Sea Drilling Project, in Edgar N. T., Saunders J. B. et al., *Initial Reports of the Deep Sea Drilling Project*, (U.S. Government Printing Office), Washington 15: 549-552.
- Pessagno E. A. Jr & Michael F. Y. 1974. — Results of shore laboratory studies on Mesozoic planktonic Foraminifera from Leg 26 Sites 255, 256, 257, and 258, in Davies T. A., Luyendyk B. P. et al., *Initial Reports of the Deep Sea Drilling Project*, (U.S. Government Printing Office), Washington 26: 969-972.
- Pessagno E. A. Jr & Newport R. L. 1972. — A technique for extracting Radiolaria from radiolarian-cherts. *Micropaleontology*, New York 18 (2): 231-234.
- Pessagno E. A. Jr & Poisson A. 1981. — Lower Jurassic Radiolaria from the Gümsülu Allochron of Southwestern Turkey (Taurides occidentales). *Bulletin of the Mineral Research and Exploration*, Ankara, 92: 47-69.
- Pessagno E. A. Jr & Whalen P. A. 1982. — Lower and Middle Jurassic Radiolaria (multicyrtid Nassellariina) from California, east-central Oregon, and the Queen Charlotte Islands, British Columbia. *Micropaleontology*, New York 28 (2): 111-169.
- Pessagno E. A. Jr, Blome C. D. & Longoria J. F. 1984. — A Revised Radiolarian Zonation for the Upper Jurassic of Western North America. *Bulletins of American Paleontology*, Ithaca, Lawrence, 87, 320: 1-51.
- Pessagno E. A. Jr, Blome C. D., Carter E. S., MacLeod N., Whalen P. A. & Yeh K. Y. 1987. — Preliminary Radiolarian Zonation for the Jurassic of North America. Part II, in *Studies of North American Jurassic Radiolaria, Cushman Foundation for Foraminiferal Research*, Special Publication, Norfolk 23: 1-18.
- Pessagno E. A. Jr, Finch W. & Abbott P. L. 1979. — Upper Triassic Radiolaria from the San Hipolito Formation, Baja California. *Micropaleontology*, New York 25 (2): 160-197.
- Pessagno E. A. Jr, Six W. M. & Yang Q. 1989. — The Xiphosryllidae Haekel and Parvicaccidae, n.fam., (Radiolaria) from the North American Jurassic. *Micropaleontology*, New York 35 (3): 193-255.
- Pessagno E. A. Jr, Whalen P. A. & Yeh K.-Y. 1986. — Jurassic Nassellariina (Radiolaria) from North American Geologic Terranes. *Bulletins of American Paleontology*, Ithaca, 91, 326: 5-75.
- Perrushchvskaya M. G. 1975a. — Structure of skeletal spines of the radiolarians Spumellaria & Nassellaria. *Zoologicheskii Zhurnal*, [Zoological Journal], Nauk Academy of Sciences, Moscow, 54, 11: 1715-1717.
- 1975b. — The skeletal structure of radiolarians. *Cytology, Nauka, USSR Academy of Sciences*, Leningrad 17: 1436-1440.
- 1975c. — Morfologicheskii kriterii v sistematike radiolyarii otriyada Nassellaria. *Trudy Vsesoyuznogo Ordena Lenina Nauchno-Issledovatel'skogo Geologicheskogo Instituta (VSEGEI)*, novaya seriya 22: 25-35.
- 1979. — Novyi variant sistemy Polycystina [New variants of the system of polycystina], in *Isdkopaemye i Sovremennye Radiolarii* [Fossil and recent Radiolarians], Zoologicheskii Institut Adkademiiya Nauk SSSR, Leningrad: 101-118.
- 1981. — The Superclass of Sarcodina, Actinopoda Calkins. Systematic and Phylogeny, in Krashneninikov V. A. (ed.), *Sistematika. Evolyutsiya i Stratigraficheskoe Znachenie Radiolyarii* [Systematic, Evolution and Stratigraphic Importance of Radiolaria], Academy of Sciences of USSR, Nauka, Moscow: 10-17 [in Russian].
- 1986. — Radiolarievyyi analiz [Radiolarian analysis]. Academy of Sciences of the URSS, Zoological Institute, Leningrad: 1-200.
- Petrushchvskaya M. G. & Kozlova G. E. 1972. — Radiolaria: Leg 14, Deep Sea Drilling Project, in Hayes D. E., Pimm A. C. et al., *Initial Reports of the Deep Sea Drilling Project*, (U.S. Government Printing Office), Washington XIV: 495-648
- Perrushchvskaya M. G., Cachon J. & Cachon M. 1976. — Sravnitel'no-morfologicheskoe izuchenie radiolyarii - osnovoye novoi sistematiki [Comparative morphological study of radiolarians - fundamentals of new taxonomy]. *Zoologicheskii Zhurnal* [Zoological Journal], Academy of Sciences, USSR, Moscow, LV, 4: 485-495.
- Premoli-Silva I., Riedel W. R., Cepek P., Davies T. A., Schrader H.-J., Thierstein H. R. & Worsley T. R. 1976. — The Results of the Deep Sea Drilling Project: A Preliminary Atlas. *Preliminary Analysis of Deep Sea Drilling Project Data*, Rosenstiel School of Marine and Atmospheric Science, University of Miami, Florida, 1.
- Protescu O. 1933. — Recherches géologiques et paléontologiques dans la bordure orientale des monts Bucogi. *Anuarul Institutului Geologic al României* 17: 527-543.
- Pujana I. 1988. — The Panraneliidae near to the Jurassic-Cretaceous Boundary at the Vaca Muerta Formation in the Province of Neuquén, Argentina. in Schmidt-Effing R. & Braun A. (eds), First International Conference on Radiolaria (EURO-RAID V), 21 to 24 July 1988 (abstract), *Geologica et Palaeontologica*, Marburg: 29.
- Pupyshev N. A. & Lipman R. KH. 1973. —

- Stratigraphic position of the Urtynbdzhal'sk complex in Central Kazakhstan. *Problems of Stratigraphy and Tectonics of Eastern Kazakhstan VSEGEI USSR*, Leningrad, New Series, 160: 10-25.
- Ransome F. L. 1894. — The geology of Angel Island. *Bulletin of the Department of Geology, University of California*, 1, No. 7: 193-234.
- Rao L. R. 1932. — Some Radiolaria from the Trichinopoly Cretaceous. *Journal of the Royal Microscopical Society*, serie 3, 52: 356-361.
- Reinhard M. & Wenk E. 1951. — Geology of the Colony of North Borneo. *Geological Survey Department of the British Territories in Borneo, Bulletin 1*: xiv + 160 p.
- Reiss Z. 1952. — On the Upper Cretaceous and Lower Tertiary microfossils of Israel. *Bulletin of the Research Council of Israel*, Jerusalem 2 (1): 37-50.
- Renz G. W. 1974. — Radiolaria from Leg 27 of the Deep Sea Drilling Project. *Initial Reports of the Deep Sea Drilling Project*, (U.S. Government Printing Office) Washington 27: 769-841.
- 1976. — The distribution and ecology of radiolaria in the Central Pacific-plankton and surface sediments. *Bulletin of the Scripps Institution of Oceanography of the University of California*, 22, 267 p.
- Richter M. 1925. — Beiträge zur Kenntnis der Kreide in Feuerland. *Neues Jahrbuch für Mineralogie, Geologie und Paläontologie*, Stuttgart 52 B: 524-568.
- Riedel W. R. 1952. — Tertiary radiolaria in western Pacific sediments. *Göteborgs Kungl. Vetenskaps-och Vitterhets-samhälles handlingar*, 6c folj., serie B, 6, n° 3: 1-18.
- 1953. — Mesozoic and late Tertiary Radiolaria of Rott. *Journal of Paleontology*, Tulsa, Oklahoma, 27, 6: 805-813.
- 1957. — Radiolaria: a preliminary stratigraphy. Rep. Swedish Deep-Sea Expedition 6 (3): 61-96.
- 1967a. — Subclass Radiolaria. Protozoa. Subclass Radiolaria, in Harland W. B. et al. (eds), *The Fossil Record, Geological Society of London and Paleontological Association*, London 8: 291-298.
- 1967b. — Some new families of Radiolaria. *Proceedings of the Geological Society of London*, London 1640: 148-149.
- 1971a. — Radiolarians from Atlantic Deep-Sea Drilling: 1057-1068, in Farinacci (ed.), *Proceedings of the II Planktonic Conference, Roma 1970*. Edizioni Tecnoscienza, Roma.
- 1971b. — Systematic classification of Polycystine Radiolaria: 649-661, in Funnell B. M. & Riedel W. R. (eds), *The Micropaleontology of Oceans*. Cambridge University Press, Cambridge, London, New York.
- 1978. — Systems of morphologic descriptors in Paleontology. *Journal of Paleontology*, Tulsa, Oklahoma 52 (1): 1-7.
- 1981. — DSDP biostratigraphy in retrospect and prospect, in Warme J. E. et al., *The Deep Sea Drilling Project. A Decade of Progress, Society of Economic Mineralogists and Paleontologists*, Special Publication, Tulsa, Oklahoma 32: 253-315.
- Riedel W. R. & Sanfilippo A. 1974. — Radiolaria from the southern Indian Ocean, Deep Sea Drilling Project, in Davies T. A., Luyendyk B. P. et al., *Initial Report of Deep Sea Drilling Project XXVI*: 771-813.
- Riedel W. R. & Schlocker J. 1956. — Radiolaria from the Franciscan Group, Belmont, California. *Micropaleontology*, New York 2 (4): 357-360.
- Robertson A. H. F. & Hudson J. D. 1974. — Pelagic sediments in the Cretaceous and Tertiary history of the Troodos Massif, Cyprus, in Hsu K. J. and Jenkyns H. C. (eds), *Pelagic Sediments on Land and Under the Sea, International Association of Sedimentologists*, Special Publication, Blackwell Scientific Publications Ltd., Oxford 1: 403-436.
- Robinson B. E. & Pessagno E. A. Jr 1988. — New Radiolaria from the Upper Triassic Glenn Shale, East-Central Alaska and their Paleogeographical Implications, in Schmidt-Effing R. & Braun A. (eds), *First International Conference on Radiolaria (EURORAD V)*, 21 to 24 July 1988 (abstract), *Geologica et Palaeontologica*, Marburg: 32.
- Roure F. & De Wever P. 1983. — Découverte de radiolarites du Trias dans l'unité occidentale des Klamath, Sud-Ouest de l'Orégon, U.S.A. Conséquences sur l'âge des péridotites de Joséphine. *Comptes Rendus de l'Académie des Sciences*, Paris, II, 297: 161-164.
- Rubey W. W. 1929. — Origin of the siliceous Mowry shale of the Black Hills region, U.S. *Geological Survey Professional Paper* 154D:153-170.
- Rundyova N.-P. & Jinaridze N. M. 1975. — On the Discoveries of the Cretaceous Radiolarites in the Salt-Bearing series of the Dombrova Kalush-Golynsky potash deposit. *Paleontology Sbornik* 12: 54-57.
- Runeva N. P. 1975. — Kompleksy tretichnykh radiolyarii p-va Kamchatka. *Trudy Vesoyuznogo Ordena Lenina Nauchno-Issledovatel'skogo Geologicheskogo Instituta (VSEGEI)*, novaya seriya 226: 87-92.
- 1981. — Radiolarian from South of Saralina and West of Kamtchatka, in Krashneninikov V. A. (ed.), *Sistematika, Evolyutsiya i Stratigraficheskoe Znachenie Radiolyarii [Systematic, Evolution and Stratigraphic Importance of radiolaria]*, *Academy of Sciences of USSR, Nauka*, Moscow: 91-94 [in Russian].
- Rüst D. 1885. — Beiträge zur Kenntniss der fossilen Radiolarien aus Gesteinen des Jura. *Palaeontographica*, Stuttgart 31 (3): 269-322.
- 1887. — Ueber neu entdeckte Radiolarien der Kreide und einiger alterer Schichten. *Jenaische Zeitschrift für Naturwissenschaft*, Jena, nov. ser., 20, 13: 143-145.
- 1888. — Beiträge zur Kenntniss der fossilen Radiolarien aus Gesteinen der Kreide.

- Palaeontographica*, Stuttgart 34 (3): 181-213.
- 1892. — Beiträge zur Kenntnis der fossilen Radiolaren aus Gesteinen der Trias und der palaeozoischen Schichten. *Palaeontographica*, Stuttgart 38 (3): 107-179.
- 1898. — Neue Beiträge zur Kenntniss der Fossilen Radiolaren aus Gesteinen des Jura und der Kreide. *Palaeontographica*, Stuttgart 45 (3): 1-68.
- Saito *et al.* 1966. — Tertiary sediment from the Mid-Atlantic Ridge. *Science*, 151, No. 3714: 1075-1079.
- Saka Y. 1983. — Preliminary note on the Jurassic strata in the Chichibu Terrane Western Shima Peninsula, Southwest Japan. *Gakujutsu Kenkyu. School of Education, Waseda University* 32: 29-34 [in Japanese with English abstract].
- Sanfilippo A. & Riedel W. R. 1976. — Radiolarian occurrences in the Caribbean Region. *Publication de la VII^e conférence géologique des Caraïbes du 30 juin au 12 juillet 1974* (VII^e Conférence des Caraïbes, Cayenne, Département Français de la Guyane): 145-168.
- 1985. — Cretaceous Radiolaria in Bolli H. M., Saunders J. B. & Persch-Nielsen K. (eds), Plankton Stratigraphy, *Cambridge Earth Science Series*, Cambridge University Press, Cambridge, London: 573-630.
- Sarnthein M., Pflaumann Ü., Ross R., Tiedmann R. & Winn K. 1992. — Transfer functions to reconstruct ocean palaeoproductivity: a comparison, in Summerhayes C. P., Prell W. L. & Emeis K. C. (eds), Upwelling systems: Evolution Since the Early Miocene, *Geological Society*, Special Publication 64: 411-427.
- Sashida K. 1983. — Lower Triassic Radiolaria from the Kanto Mountains, Central Japan. Part. 1: Palaeoscenediidae. *Transactions and Proceedings of the Palaeontological Society of Japan*, New Series, Tokyo 131: 168-176.
- 1988. — Lower Jurassic multisegmented Nassellaria from the Itsukaichi area, western part of Tokyo Prefecture, central Japan. *Science Reports-Institute of Geoscience University of Tsukuba - Geological Science*, Tsukuba, B, 9: 1-27 [in English].
- Sashida K., Igo H., Takizawa S., Hisada K., Shibata T., Tsukada K. & Nishimura H. 1982a. — On the Jurassic Radiolarian assemblages in the Kanto district. *News of Osaka micropaleontologists*, Special Volume, Osaka 5: 51-66. [in Japanese with English abstract].
- Sashida K., Igo H., Takizawa S. & Hisada K. 1982b. — On the occurrence of Jurassic Radiolarians from the Kanto Region and Hida Mountains, Central Japan. *Annual Report of the Institute of Geosciences*, Tsukuba University 8: 74-77.
- Sashida K., Igo H., Hisada K., Tonishi K., Iyota N. & Iwasaki T. 1984. — Cretaceous radiolarians from the Kanto Mountains, Central Japan. *Annual Report of the Institute of Geosciences*, Tsukuba 10: 106-110.
- Sashida K., Tonishi K. & Igo H. 1986. — Lower Jurassic Radiolarians from the Takarazawa area of Itsukaichi Town, Tokyo Prefecture, central Japan, in Recent Progress of Research on Radiolarians and radiolarian Terranes of Japan, *News of Osaka Micropaleontologists*, Special Volume, Osaka 7: 35-43 [in Japanese with English abstract].
- Sato T., Murata M. & Yoshida H. 1986. — Triassic to Jurassic radiolarian biostratigraphy in the southern part of Chichibu, terrain of Kyushu, Japan, in Recent Progress of research on Radiolarians and radiolarian Terranes of Japan, *News of Osaka Micropaleontologists*, Special Volume, Osaka, 7: 9-23 [in Japanese with English abstract].
- Sato T. & Nishizono Y. 1983. — Triassic and Jurassic Radiolarian assemblages from two continuous sections in the Kuma massif, Kyushu, Japan. *News of Osaka Micropaleontologists*, Osaka 11: 33-47.
- Sato T., Nishizono Y. & Murata M. 1982. — Palaeozoic and Mesozoic Radiolarian faunas from the Shikumasen Formation. *News of Osaka Micropaleontologists*, Special Volume, Osaka 5: 301-310 [in Japanese with English abstract].
- Satoru K. & Mizutani S. 1987. — Triassic and Jurassic radiolaria from the Nandan Range, Northeast China. *Transactions and Proceedings of Palaeontological Society of Japan*, Tokyo, N.S. 148: 256-275.
- Schaaf A. 1981. — Late Early Cretaceous Radiolaria from Deep Sea Drilling Project. Leg.62, in Thiede J., Vallier T. L. *et al.*, *Initial Reports of the Deep Sea Drilling Project*, (U.S Government Printing Office), Washington LXII: 419-470.
- 1984a. — *Les Radiolaires du Crétacé inférieur et moyen: biologie, systématique, biochronologie et paléoenvironnement*. Thèse de doctorat, Université de Strasbourg, 272 p.
- 1984b. — *Les Radiolaires du Crétacé inférieur et moyen: biologie et systématique*. *Sciences géologiques, Mémoires*, Strasbourg 75: 3-189.
- 1985. — Un nouveau canevas biochronologique du Crétacé inférieur et moyen: les biozones à Radiolaires. *Sciences Géologiques, Bulletin*, Strasbourg 38 (3) : 227-269.
- Schaaf A., Polino R. & Lagabrielle Y. 1985. — Nouvelle découverte de Radiolaires d'âge Oxfordien supérieur-Kimmeridgien inférieur, à la base d'une série supra-ophiolitique des Schistes Lustrés piémontais (Massif de Traversera, Haut Val Maïra, Italie). *Comptes Rendus de l'Académie des Sciences*, Paris, II, 301, 14 : 1079-1084.
- Schaaf A. & Thomas V. 1986. — Les radiolaires campaniens du Wadi Ragni (nappe de Semail, Oman) : un nouveau repère chronostratigraphique de l'obduction omanaise. *Comptes Rendus de l'Académie des Sciences*, Paris, II, 303, 17 : 1593-1598.
- Schmidt-Effing R. 1979. — Alter und Genese des

- Nicoya-Komplexes, einer ozeanischen Paläokruste (Oberjura bis Eozän) im südlichen Zentralamerika. *Sonderdruck aus der Geologischen Rundschau*, Stuttgart 68 (2): 457-494.
- 1980. — Radiolarien der Mittel-Kreide aus dem Santa Elena-Massif of Costa Rica (Central America). *Neues Jahrbuch für Geologie und Paläontologie Abhandlungen*, Stuttgart, 160, 2: 241-257.
- Scrivenor 1929. — Radiolaria bearing rocks in the Maylay Peninsula. *Mijnningenieur, Jaarg.* 10 (11): 238-239.
- Searight W. V. 1938. — The microfauna of the Sully member of the Pierre. *Proceedings of the Iowa Academy of Science*, 45: 135-137.
- Seiders V. M. & Blome C. D. 1988. — Implications of Upper Mesozoic conglomerate for suspect terrane in western California and adjacent areas. *Geological Society of America Bulletin*, Boulder 100: 374-391.
- Seiders V. M., Pessagno E. A. Jr & Harris A. G. 1979. — Radiolarians and Conodonts from pebbles in the Franciscan assemblage and the Great valley sequence of the California Coast Ranges. *Geology*, Boulder 7: 37-40.
- Sido M. & Sikahonyi L. 1953. — Az Urkuti es eplenyi manganer-tettulet mikropaleontologiai kiertekesele [L'évaluation micropaléontologique du terrain manganésifère d'Urkut et d'Epleny]. *Földtani Közlemény*, 83, pr. 10-12: 401-418.
- Smith W. D. 1916. — Notes on radiolarian cherts in Oregon. *American Journal of Science*, serie 4, 42: 299-300.
- Sollas J. W. 1873. — On the flints nodules of the Trimmingham Chalk. *Annals and magazine of natural history*, 55, 1.6: 450-451.
- Sosson M., De Wever P. & Vrielynck B. 1984. — Datation et analyse structurale de l'unité ophiolitique de Hot Spring Range (NW du Nevada, Etats-Unis): conséquences sur l'âge de mise en place de ce domaine océanique sur le craton nord américain. *Comptes Rendus de l'Académie des Sciences*, Paris, II, 298, 6: 235-240.
- Sporli & Aita 1988. — Field Trip Guide to Waipapa Basement rocks, Kawakawa Bay, Auckland. *Geological Society of New Zealand Miscellaneous Publication n° 39*: 1-28.
- Sporli, Aita & Gibson 1989. — Juxtaposition of Tethyan and non-Tethyan Mesozoic radiolarian faunas in melanges, Waipapa Terrane, North Island, New Zealand. *Geology*, 17, No. 8: 753-756.
- Squinabol S. 1903. — Le Radiolarie dei noduli selciosi nella Scaglia degli Euganei, Contribuzione I. *Rivista italiana di paleontologia*, Milan, IX, 4: 105-150.
- 1904. — Radiolarie cretacee degli Euganei. *Atti e memorie dell'Accademia di Scienze, Lettere ed Arti*, Padova, new serie 20: 171-244.
- 1913. — Radiolari della strada nazionale al Monginervo [Radiolaria from the national road of Monginervo]. *Bollettino del R. Comitato geologico d'Italia*, volume 43 (ser. 5, vol. 3), n° 2-3: 281-289.
- 1914. — Contributo alla conoscenza dei Radiolari fossili del Veneto. - Appendice - Di un genere di Radiolari caratteristico del Secondario. *Memorie dell'Istituto geologico della R. Università di Padova*, Padova 2: 249-306.
- Sraunfirth R. M. 1948. — Applied micropaleontology in coastal Ecuador. *Journal of Paleontology* 22 (2): 113-151.
- Sreiger T. 1981. — Kalkturbidite im Oberjura der Nordlichen Kalkalpen (Barmsteinkalke, Salzburg, Österreich) [Upper Jurassic limestone turbidites from the Northern Calcareous Alps (Barmstein Limestones; Salzburg, Austria)]. *Facies*, Erlangen, 4: 215-348.
- Streinberg E. 1988. — New Stratigraphic Data on Jurassic-Cretaceous Radiolarites within the Ophiolitic Nicoya Complex (Costa Rica - Central America), in Schmidt-Effing R. & Braun A. (ed.), First International Conference on Radiolaria (EURAD V), 21 to 24 July 1988 (abstract). *Geologica et Palaeontologica*, Marburg: 35.
- Steinberg G. 1981. — Biosiliceous sedimentation, radiolarite periods and silica budget fluctuations. *Oceanologica Acta*, sp.: 149-154.
- Stevens G. R. 1980. — Southwest Pacific faunal Paleobiogeography in Mesozoic and Cenozoic times: a review. *Palaeogeography, Palaeoclimatology, Palaeoecology*, Amsterdam: 31.
- Stoeseke K. & Hiltermann H. 1940. — Mikrofaunen aus dem Tertiär Nordwestdeutschlands. *Abhandlungen der Reichsstelle für Bodenforschung*, Riff 201, Berlin, 26 p.
- Sugano K. 1975. — Recent development of investigations on the Radiolaria in the oceanic region. *Kaiyo Kagaku (Marine Science)* 7: 29-34.
- 1986. — On the redeposition of radiolarian fossil, in Recent Progress of Research on Radiolarians and radiolarian Terranes of Japan. *News of Osaka Micropaleontologists*, Special Volume, Osaka 7: 131-139 [in Japanese with English abstract].
- Sugano K. & Nakaseko K. 1968. — On the assemblage of fossil Radiolarians in the neighbourhood of the Nishiyama oil field, Niagara prefecture, Japan. *Studies of Fossil Radiolarian-Stratigraphy of the Neogene Formation in Niigata Prefecture, Japan 1. Memoirs of Osaka Kyoiku University*, Osaka, 3, 17: 1-14 [in Japanese with English abstract].
- 1970. — On the Assemblage of fossil Radiolarian in the "Chuo Yutai". *Studies of fossil Radiolarian-stratigraphy of the Neogene Formation in Niigata Prefecture, Japan 2. Memoirs of the Osaka Kyoiku University*, Osaka 19: 33-49 [in Japanese with English abstract].
- Sugisaki R., Yamamoto K. & Adachi M. 1982. — Triassic bedded cherts in central Japan are not pelagic. *Nature*, London, 298, 5874: 644-647.

- Sujkowski Zb. 1931. — Petrografia kredy Polski. Kreda z głębokiego wiercenia w Lublinie w porównaniu z kreda niektórych innych obszarów Polski. *Sprawozdania Polskiego instytutu geologicznego* 6 (3): 485-628.
- Sunouchi H., Sugano K. & Ogawa Y. 1982. — Occurrence of Jurassic Radiolarians from siliceous claystone in the Northern belt of the Chichibu Terrane, North of Ino Town, Kochi Prefecture and its significance. *Journal of the Geological Society of Japan*, Tokyo, 88, 12: 975-978 [in Japanese].
- Suyari K. 1986a. — Radiolarian Assemblages from the Torinosu Group and the Cherts of the North Subbelt of the Shimanto Belt, in Recent Progress on Radiolarians and radiolarian Terranes of Japan, *News of Osaka Micropaleontologists*, Special Volume, Osaka 7: 245-254 [in Japanese with English abstract].
- 1986b. — Restudy of the Northern Shimanto Subbelt in Eastern Shikoku. *Journal of Science University, Tokushima* XIX: 45-54.
- Suyari K. & Kuwano Y. 1986. — Radiolarian Age of the Torinosu Group, Shikoku, Japan. Part 2. *Journal of Science, University, Tokushima* XIX: 37-43.
- Suyari K. & Yamasaki T. 1987. — Boundary between the North and South Shimanto Subbelts in Tokushima Prefecture - The Aki Tectonic Line reconsidered. *Journal of Science of College of General Education, University of Tokushima, Tokushima* XX: 37-46 [in Japanese with English abstract].
- 1988. — Microfossil age of the northern margin of the Shimanto South Subbelt in Shikoku. *Journal of Science of College of General Education, University of Tokushima, Tokushima* XXI: 107-133 [in Japanese with English abstract].
- Suzuki J. 1939. — On the age of the Sambagawa System. *Proceedings of the Imperial Academy of Japan*, Tokyo 15: 56-59.
- Swain F. M. 1977. — Stratigraphic Micropaleontology of the Atlantic Basin and Borderlands. *Developments in Palaeontology and Stratigraphy*, Amsterdam 6: 167-184.
- Swanberg N. R. & Anderson R. O. 1985. — The nutrition of radiolaria: trophic activity of solitary Spumellaria. *Limnology and Oceanography* 30/3: 646-652.
- Swanberg N. R. & Bjørklund K. R. 1992. — The radiolarian fauna of western Norwegian fjords: a multivariate comparison of the sediment and plankton assemblages. *Micropaleontology*, New York, 38/1, 1: 57-74.
- Tajika J. & Iwata K. 1983. — Occurrence of Cretaceous Radiolarians from the Hidaka Supergroup around Maruseppu, Northeast Hokkaido. *Journal of the Geological Society of Japan*, Tokyo, 89, 9: 535-538 [in Japanese].
- Takahashi K. 1986. — Seasonal fluxes of pelagic diatoms in the Subarctic Pacific. *Deep-Sea Research* 33: 1225-1251.
- Takashima K. & Koike T. 1982. — Triassic Radiolarian faunas in chert from some areas in Japan. *News of Osaka Micropaleontologists*, Special Volume, Osaka 5: 45-50 [in Japanese with English abstract].
- Takemura A. 1980. — The Palaeo-Mesozoic system of the Tamba Belt in the Southern part of Kameoka City, Kyoto Prefecture, Japan. *News of Osaka Micropaleontologists*, Osaka 8: 22-31 [in Japanese].
- 1986. — Classification of Jurassic Nassellarians (Radiolaria). *Palaeontographica*, Stuttgart, Abt. A, 195, 1-3: 29-74.
- Takemura A. & Nakaseko K. 1982a. — Two new Jurassic genera of family Palaeoscenediidae (Radiolaria). *Transactions and Proceedings of the Palaeontological Society of Japan*, New Series, Tokyo 128: 452-464.
- 1982b. — Jurassic Palaeoscenediids from manganese ore deposits in the Mino Belt and their significance on evolution and classification of Nassellaria. *News of Osaka Micropaleontologists*, Special Volume, Osaka 5: 173-182 [in Japanese with English abstract].
- 1982c. — On cephalic structures of Jurassic Nassellaria. *News of Osaka Micropaleontologists*, Special Volume, Osaka 5: 183-194 [in Japanese with English abstract].
- 1983. — *Persens*, a new genus of Jurassic Palaeoscenediidae and the Phylogeny of subfamily Hilarisirecinae. *Memoirs of the Faculty of Science, Kyoto University - Series of Geology and Mineralogy*, Kyoto, XLIX, 1 & 2: 111-118.
- 1986. — The cephalic skeletal structure of Jurassic "Eucyrtidium" (Radiolaria). *Journal of Paleontology*, Tulsa, Oklahoma 60 (5): 1016-1024.
- Takeshita T. 1982. — Stratigraphy and geologic structure of the Shimanto Group in the Northern part of Minaminaka mountainous region, Miyazaki Prefecture. *Journal of the Geological Society of Japan*, Tokyo 88 (1): 1-18 [in Japanese with English abstract].
- Taketani Y. 1982. — Cretaceous Radiolarian Biostratigraphy of the Urakawa and Obira Areas, Hokkaido. *Science Reports of the Tohoku University, Geology*, Sendai, 2, 52, 1-2: 1-76.
- Tan Sin-Hok 1927. — Over de samenstelling en het ontstaan van krijt- en mergel-gesteenten van de Molukken. *Jaarboek van het mijnwezen in Nederlandsch Oost-Indie, jaargang 55, 1926, verhandelingen, 3rd gedeelte*, Delph: 5-165.
- 1931. — Discoasteridae, Cocolithinae and Radiolaria. *Leidsche geologische mededeelingen*, Leiden 5: 92-114.
- Tan Zh. & Su X. 1982. — Studies on the Radiolaria in sediments of the East China Sea (continental shelf). *Studia Marina Sinica* 19: 129-216.
- Tanaka H., Fujita H., Miyamoto T. & Hase A. 1985. — Discovery of Late Jurassic radiolarian fossils from the Shinkai Formation developed to the South of Mt. Haidate, Oita Prefecture, Kyushu. *Journal of Geological Society of Japan*, Tokyo 91: 569-571.

- Termier P. & Maury F. 1928. — Nouvelles observations géologiques dans la Corse orientale : les radiolarites. *Comptes rendus des séances de l'Académie des Sciences* (Paris), 186 : 1077-1081.
- Thalman H. E. 1946. — Fossil radiolarian beds of southwestern Ecuador. *Geological Society of America Bulletin*, 57, No. 12, pt. 2: 1285.
- Thiebault F., De Wever P. & Raoult J.-F. 1986. — Marqueurs minéralogiques et géochimiques au passage Jurassique-Crétacé dans le Pinde du Péloponnèse méridional (Grèce) - Signification géodynamique. *Revue de Géologie Dynamique et de Géographie Physique*, Paris, 27, 5 : 351-362.
- Thiebault F., De Wever P., Fleury J. J. & Bassoullet J. P. 1980. — Précisions sur la série stratigraphique de la nappe du Pinde-Olonos de la presqu'île de Koroni (Péloponnèse méridional, Grèce) : l'âge des radiolarites (Dogget - Crétacé supérieur). *Annales de la Société géologique du Nord*, Lille, C, 1.2 : 91-105.
- Thurow J. 1988. — Radiolarians of Turonian bituminous carbonates (transgressive sequences of Northwest African Coastal Basins), in Schmidt-Effing R. & Braun A. (eds), First International Conference on Radiolaria (EURO-RAD V), 21 to 24 July 1988 (abstract), *Geologica et Palaeontologica*, Marburg: 37.
- Thurow J. & Anderson R. O. 1986. — An interpretation of skeletal growth patterns of some Middle Cretaceous and modern Radiolarians. *Micropaleontology*, New York 32 (4): 289-302.
- Thurow J. & Kuhn W. 1988. — Mid-Cretaceous Radiolarian Ecology and Biostratigraphy in the Western Mediterranean. Comparison with planktonic and benthic agglutinated Foraminifers, in Schmidt-Effing R. & Braun A. (eds), First International Conference on Radiolaria (EURO-RAD V), 21 to 24 July 1988 (abstract), *Geologica et Palaeontologica*, Marburg: 38.
- Tikhomirova L. B. 1975. — The first finding of cryptocephalic Radiolarians in Siliceous strata of Sikhote-Alin. *Paleontology Sbornik* 12: 42-47.
- 1981. — First results of the study of Jurassic Radiolarians from Caucasus, in Krashneninikov V. A. (ed.), *Sistematika, Evolyutsiya i Stratigraficheskoe Znachenie Radiolyarii* [Systematic, Evolution and Stratigraphic Importance of Radiolaria], *Academy of Sciences of USSR, Nauka*, Moscow: 83-88 [in Russian].
- 1983. — Pozdnejuryuskiye-rannemelovyye radiolyarii Karpat (na territorii SSSR) [Late Jurassic-Early Cretaceous Radiolarians of the Carpathians (on the territory of the USSR)], *Voprosy Mikropaleontologii*, Moscow 26: 72-86 [English abstract].
- 1984. — The Upper Jurassic and Cretaceous radiolarian of the Mediterranean paleogeography region (the Carpathians and the Lesser Caucasus), in Petrushevska M. G. & Stepanjants S. D. (eds), *Morphology, Ecology and Evolution of Radiolarians* [Morfologii, Ekologii i evolyutsionnii radiolyarii], *Proceedings of the Fourth Eurorad Conference, 15-19 October, Academy of Science, Academiya Nauk SSR, Leningrad*: 159-171 [in Russian].
- 1987. — New Jurassic radiolarians from Southwest Bulgaria and some regions of the USSR. *Geologica Balcanica*, Sofia 17, 3: 27-42.
- Tipper H. W. Carter E. S. 1990. — Evidence for defining the Triassic-Jurassic boundary at Kennecott Point, Queen Charlotte Islands, British Columbia. *Geological Survey of Canada. Current Research*, paper 90-1F: 37-41.
- Tippit P. R., Pessagno E. A. Jr & Smewing J. D. 1983. — The biostratigraphy of sediments in the volcanic unit of the Semail ophiolites. *Journal of Geophysical Research*, Washington, 86, B4: 2756-2762.
- Trauth F. 1950. — Die fazielle Ausbildung und Gliederung des Oberjura in den nordlichen Ostalpen. *Verhandlungen der Geologischen Bundesanstalt*, Jahrgang 1948 n° 10-12: 145-218.
- Tromp S. W. 1947. — A tentative classification of the main structural units of the Anatolian orogenic belt. *Journal of Geology*, 55, No. 4: 362-377.
- 1948. — Shallow-water origin of radiolarites in southern Turkey. *Journal of Geology*, 56, No. 5: 492-494.
- Tshedia D. M. 1981. — Paleocological modifications of Radiolarians in Minor Asia and Krima, in Krashneninikov V. A. (ed.), *Sistematika, Evolyutsiya i Stratigraficheskoe Znachenie Radiolyarii* [Systematic, Evolution and Stratigraphic Importance of radiolaria]. *Academy of Sciences of USSR, Nauka*, Moscow: 111-117 [in Russian].
- 1984. — The main directions in the explorations of the fossil Radiolarians of the Middle Asia, in Petrushevska M. G. & Stepanjants S. D. (eds), *Morphology, Ecology and Evolution of Radiolarians. Proceedings of the Fourth Eurorad Conference, 15-19 October, Academy of Science, Leningrad*: 221-222 [in English].
- 1985. — The possibility of the system logical analysis in Stratigraphy. *Eurorad IV, Leningrad October 15 to 19, 1984 - Fourth International Meeting of Radiolarists organized by Eurorad - Radiolaria*, Paris 9: 50.
- Turner J. 1965. — Upper Jurassic and Lower Cretaceous Microfossils from the Hautes-Alpes. *Paleoentology*, London 8 (3): 391-396.
- Twerenbold E. 1955. — Les Préalpes entre la Sarine et les Tours d'Al. Région des Monts Chevreuils. *Bulletin de la Société Fribourgeoise des Sciences Naturelles* 44 : 5-116.
- Tyrell J. B. 1890. — Foraminifera and Radiolaria from the Cretaceous of Manitoba. *Transactions of the Royal Society of Canada*, Montreal, Sect. IV, 1891: 111-115.
- Ujii H. & Hashimoto Y. 1983. — Geology and Radiolarian fossils in the inner zone of the Morobu

- Belt in Okinawa-jima and its environs. *Chikyū (Earth)* 5: 706-712 [in Japanese].
- Urquhart E. 1994. — New data on the ranges of some Cretaceous Tethyan Radiolaria. *Comptes Rendus de l'Académie des Sciences de Paris, série II*, 318, 2: 1401-1407.
- Vadasz E. 1952. — La formation manganésifère de la montagne Bakony. *Acta geologica Academiae scientiarum hungaricae* 1: 349-382.
- Vasicek M. G. 1947. — Polznamky k mikrobiostratigrafii mágurského flyše na Morave [Remarks on the microbiostratigraphy of the Magur Flysch in Moravia]. *Vestník Státního Geologického Ústavu Republiky Československé*, Prague, volume 22: 235-256.
- Vasoevich N. B. 1938. — O prisutstvii neokomskikh i yurskikh otlozhenii v Lagichskikh gorakh Azerbaidzhana [On the occurrence of Neocomian and Yursk deposits in the Lagichsk mountains of Azerbaidzhan]. *Doklady Akademii Nauk SSSR, Novaya seriya (new series)*, 21, n° 8: 400-403.
- Vermunt 1937. — Geology of the province of Pinar del Rio, Cuba. *Geographische en geologische mededeelingen*. Utrecht, n° 13, 60 p.
- Vinassa de Regny P. E. 1898a. — Nuove famiglie e nuove generi di radiolari. *Rivista italiana di paleontologia*, Bologna 4 (2): 1-4.
- 1898b. — I radiolari delle franiti tironiane di Carpena presso Spezia. *Atti della Reale Accademia dei Lincei, Rendiconti, Classe di Scienze Fisiche, Matematiche e Naturali*, Roma, 5, 7, 2: 34-39.
- 1899. — I radiolari delle franiti tironiane di Carpena (Spezia). *Palaeontographia italica*, Pisa 4: 217-238.
- 1900. — Rocce e fossili dei dintorni di Grizzana e di Lagaro nel Bolognese. *Bollettino della Società geologica italiana*, Roma 19 (2): 321-348.
- 1901-1902. — Radiolari cretacei dell'isola di Karpathos. *Memorie della R. Accademia delle scienze dell'Istituto di Bologna*, Bologna, 5, 9: 497-512.
- Vishnevskaya V. S. 1981a. — Spread of radiolaria Amphipyndacidae in the Far east region of the USSR. *Bjł. MOIP*, Moscow, 56, 4: III.
- 1981b. — Use of Radiolarians in paleoenvironmental studies. in Krashneninikov V. A. (ed.), *Sistematika, Evolyutsiya i Stratigraficheskie Znachenie Radiolyarii* [Systematic, Evolution and Stratigraphic Importance of Radiolaria]. *Academy of Sciences of USSR, Nauka*, Moscow: 108-111 [in Russian].
- 1981c. — Morphologic peculiarities of Radiolarians under scanning electron microscope. in Krashneninikov V. A. (ed.), *Sistematika, Evolyutsiya i Stratigraficheskie Znachenie Radiolyarii* [Systematic, Evolution and Stratigraphic Importance of radiolaria]. *Academy of Sciences of USSR, Nauka*, Moscow: 105-108 [in Russian].
- 1984a. — Radiolarians of the genus *Amphipyndax* from the Olutor Ridge of the USSR and their stratigraphical ranges affiliation. in Petrushevskaya M. G. & Stepanjants S. D. (eds), *Morphology, Ecology and Evolution of Radiolarians, Proceedings of the Fourth EuroRad Conference, 15-16 October, Academy of Science, Leningrad: 187-193* [in Russian].
- 1984b. — Radiolariti kak analogii sovremennih radiolarievih ilov. *Nauka*, Moscow: 120.
- 1985a. — New species of Mesozoic radiolarians. *EuroRad IV, Leningrad October 15 to 19, 1984 - Fourth International Meeting of Radiolarists organized by EuroRad - Radiolaria*. Paris 9: 78.
- 1985b. — Comparison of Mesozoic zonal scales of the continents and oceans by radiolarians. *Voprosy mikropaleontologii*, Moscow 27: 188-200.
- 1986. — Middle to Late Cretaceous Radiolarian Zonation of the Bering Region, USSR, in De Wever P. (ed.), *EURORAD IV, Marine Micropaleontology*, New York, 11, 1-3: 139-149.
- 1987a. — Composition and age of the Cretaceous siliceous-volcanogenic formation of the Olyutor Range. in Geology of Southern Koryak Highland. Project 195 "Ophiolites and Lithosphere of Marginal Seas". *Academy of Sciences of the USSR, International Geological Correlation Programme 551 (571.66)*, Nauka, Moscow: 10-42.
- 1987b. — Paleontological Description of Species Radiolaria. in Geology of Southern Koryak Highland. Project 195 "Ophiolites and Lithosphere of Marginal Seas". *Academy of Sciences of the USSR, International Geological Correlation Programme, 551 (571.66)* Nauka, Moscow: 43-65.
- 1988a. — Late Jurassic-Cretaceous Radiolarians of the Greater Caucasus as a Key for Determination of Age and the Past Tectonic Setting of the Ophiolites from the Lesser Caucasus. in Schmidt-Effing R. & Braun A. (ed.), *First International Conference on Radiolaria (EUROAD V)*, 21 to 24 July 1988 (abstract), *Geologica et Palaeontologica*, Marburg: 39.
- 1988b. — Late Mesozoic Radiolarian Strata from USSR, in Schmidt-Effing R. & Braun A. (eds), *First International Conference on Radiolaria (EUROAD V)*, 21 to 24 July 1988 (abstract), *Geologica et Palaeontologica*, Marburg: 39.
- 1988c. — Middle Cretaceous Radiolaria and their Significance for Paleogeographic Reconstructions. in Schmidt-Effing R. & Braun A. (eds), *First International Conference on Radiolaria (EUROAD V)* 21 to 24 July 1988 (abstract), *Geologica et Palaeontologica*, Marburg: 39-40.
- 1993. — Jurassic and Cretaceous radiolarian biostratigraphy in Russia. in Blueford J. R. & Murchey B. L. (eds), *Radiolaria of giant and subgiant fields in Asia. Nazarov Memorial volume, Micropaleontology Press, Special Publication, volume 6*, American Museum of Natural History, New York: 175-200.
- 1996. — Radiolarians of the Peri-Tethys and their stratigraphic significance. *Reports of RAS*, 346, No. 5: 638-641.

- Vishnevskaya V. S. & Bernard V. V. 1986. — Age and Paleoenvironment of the Mesozoic cherts from Kamchatka Peninsula, in *Ocherki po Geologii Vostoka SSSR [Outline of Geology of USSR East]*. Nauka, Moscow: 35-41.
- Vishnevskaya V. S. & Kazintsova L. I. 1990. — Cretaceous radiolaria from USSR: 44-58, in *Radiolaria for stratigraphy*. Sverdlnvsk.
- Vishnevskaya V. S., Sukhov A. N. & Chekhovich V. D. 1981. — The age of the Vatyinskaya (Olyutor zone of the Koryakskoe Upland), *Izvestiya Akademiy Nauk SSSR. Proceedings of the USSR, Academy of Sciences, Geological Series*, Moscow 12: 71-78.
- Vishnevskaya V. S., Chejovich V. P. & De Albear J. F. 1982. — Edad y condiciones de formacion de las silicatas de la zona de Camajuani (Cuba). *Ciencias de la Tierra y del Espacio*, Cuba 6: 113-117.
- Vogler J. 1941. — Ober-Jura und Kreide von Misol (Niederlandisch-Ostindien). *Paleontographica*, supplement-volume 4, pt. 4, 1 fig. 4: 243-293.
- Wakita K. 1982. — Jurassic radiolarian from Kuzuryu-ko - Gujo-hachiman area. *News of Osaka Micropaleontologists*, Special Volume, Osaka 5: 153-171 [in Japanese with English abstract].
- 1983. — Allochthonous blocks and submarine slide deposits in the Jurassic formation southwest of Gujo-hachiman, Gifu Prefecture, central Japan. *Bulletin of the Geological Survey of Japan*, Kawasaki, 34, 7: 329-342.
- 1988. — Early Cretaceous melange in the Hida-Kanayama area, central Japan. *Bulletin of the Geological Survey of Japan*, Kawasaki, 39, 6: 367-421.
- Wakita K. & Isomi H. 1986. — Discovery of Triassic and Jurassic radiolarians from the Sakamoto-toge area, Gifu Prefecture and its significance. *Bulletin of the Geological Survey of Japan*, Nagasaki, 37, 6: 325-333.
- Wakita K. & Okamura Y. 1982. — Mesozoic sedimentary rocks containing allochthonous blocks, Gujo-Hachiman, Gifu Prefecture, Central Japan. *Bulletin of Geological Survey of Japan*, Kawasaki, 33, 4: 161-185 [in Japanese with English abstract].
- Wall J. H. 1975. — Diatoms and radiolarians from the Cretaceous of Alberta - a preliminary report, in Caldwell W. G. E. (ed.), *The Cretaceous System in the Western Interior of North America*, *Geological Association of Canada*, Special Paper, 13: 391-410.
- Wallich G. C. 1883. — Note on the detection of Polycystina within the hermetically closed cavities of certain nodular flints. *Annals and Magazine of Natural History*, serie 5, volume 12: 52-53.
- Wang Yujing & Sheng Jinzhang 1982. — Fossil Radiolarians from Gyirong and Gyangze districts of Southern Xizang, in *Palaontology of Xizang (Book IV) from the Series of the Scientific Expedition to the Qinghai-Xizang Plateau*. Science Press: 81-96 [in Chinese with English abstract].
- Wetzel O. 1933. — Die in organischer Substanz erhaltenen Mikrofossilien des baltischen Kreide-Feuersteins mit einem sedimentpetrographischen und stratigraphischen Anhang. *Palaontographica*, 77: 141-186, volume 78, pt. A: 1-110.
- 1961. — New microfossils from Baltic Cretaceous flintstones. *Micropaleontology*, 7, No 3: 337-350.
- Weynschenk R. 1950. — Die Jura-Mikrofauna und-flora des Sonnwendgebirges (Tirol). *Schlem-Schriften* (Innsbruck), n° 83: 1-33.
- 1951. — Zu W. Vortisch's "Bemerkungen zu der Schrift von R. Weynschenk über das Sonnwendgebirge". *Neues Jahrbuch für Geologie und Paläontologie, Monatshefte*, 11: 329-334.
- White M.-P. 1928. — Some index Foraminifera of the Tampico Embayment area of Mexico (Part II). *Journal of Paleontology*, Tulsa, Oklahoma 2 (4): 280-317.
- Wildberg H., Gursky H.-J., Schmidt-Effing R. & Strebin M. 1982. — Development of the Pacific Ophiolite Sequence ("Nicoya Complex") in north-western Costa Rica (Central America). *Ofoliti*, Bologne 2 (3): 525-526.
- Winkler-Hermaden A. 1934. — Neue Studienresultate aus dem mittleren und oberen Isonzogebiet. *Anzeiger der Akademie der Wissenschaften*, Wien (Mathematische-naturwissenschaftliche Klasse), 71: 56-59.
- Wirz 1945. — XV. Beiträge zu Kenntnis des Ladinikums im Gebiete des Monte San Giorgio. "Die Triasfauna der Tessiner Kalkalpen". *Schweizerische Palaontologische Abhandlungen*, 65: 1-84.
- Wisniowski T. 1889. — Beiträge zur Kenntniss der Mikrofauna aus den Oberjurassischen Feuersteinknollen der Umgegend von Krakau. *Jahrbuch der Kaiserlich-Königlichen geologischen Reichsanstalt*, Wien, 38, 5: 27-43.
- Woodward A. & Thomas B. W. 1885. — On the Foraminifera of the boulder-clay, taken from a well-shaft 22 feet deep, Meeker County, central Minnesota. *The Geological and Natural History Survey of Minnesota*, volume 3, part 1: 164-177.
- 1895. — The microscopical fauna of the Cretaceous in Minnesota, with additions from Nebraska and Illinois (Foraminifera, Radiolaria, Cocoliths, Rhabdoliths). *Geology of Minnesota*, volume 3, pt. 1. Paleontology, chapter 2: 25-52.
- Wu H. R. 1980. — Geological outline and geological history of the Yarlung Zangro Suture Zone. *Proceedings Symposium Qinghai-Xizang (Tibet) Plateau (Beijing, Chian)*, Beijing: 567-577.
- 1986. — Some new genera and species of Cenomanian Radiolaria from Southern Xizang (Tibet). *Acta Micropaleontologica* 3 (4): 347-360.
- 1988. — Upper Jurassic and Lower Cretaceous Radiolarians of Xialu Chert, southern Tibet and its Geological Significance (preliminary abstract). in Schmidt-Effing R. & Braun A. (eds), *First International Conference on Radiolaria (EURO-*

- RAD V), 21 to 24 July 1988 (abstract), *Geologica et Palaeontologica*, Marburg: 41.
- Wu H. R. & Li H. S. 1982. — Radiolaria from the Olistostrome of the Zonghuo Formation, Gyangze, Southern Xizang (Tibet). *Acta Palaeontologica Sinica*, Beijing 21 (1): 64-71.
- Wu H. R. & Wanming D. 1980. — Basic geological features of the yarlung Zangbo Ophiolite Belt, Xizang, China. *Ophiolites, Proceedings of International Ophiolite Symposium 1979*, Cyprus: 462-472.
- Wu H. R., Dongan W. & Lianchen W. 1977. — The Cretaceous of Laze-Jiangze District, Southern Xizang. *Scientia Geologica Sinica 1976*, Beijing 7 (3): 250-262.
- Xinghui S. 1982. — Description of 11 new species of Radiolaria from the Xish Island, Guangdong Province, China. *Oceanologia et Limnologia Sinica*, Beijing 13 (3): 275-284.
- Yamamoto H. 1983. — Occurrence of Late Jurassic Radiolarians of the *Mirafusus baileyi* Assemblage from Neo Village, Gifu Prefecture, Central Japan. *Journal of the Geological Society of Japan*, Tokyo, 89, 10: 595-596 [in Japanese].
- Yamamoto H., Mizutani S. & Kagami H. 1985. — Middle Jurassic Radiolarians from Blake Bahama Basin, West Atlantic Ocean. *Bulletin of the Nagoya University Museum*, Nagoya 1: 25-49.
- Yamasaki T. 1987. — Radiolarian assemblages of the Izumi Group in Shikoku and western Awaji Island, Southwest Japan. *Journal of Geological Society of Japan*, Tokyo, 93, 6: 403-417.
- Yamauchi M. 1982. — Upper Cretaceous radiolarians from Northern Shimanto Belt along the course of Shimanto River, Kochi Prefecture, Japan. *News of Osaka Micropaleontologists*, Special Volume, Osaka 5: 383-397 [in Japanese with English abstract].
- Yanai S. 1983. — Paleogeographic development of the Shimanro geosyncline in the case of the Eastern Shikoku District, Southwest Japan. *Journal of the Geological Society of Japan*, Tokyo, 89, 10: 575-593 [in Japanese with English abstract].
- Yang Q. & Mizutani S. 1991. — Radiolaria from the Nadanhada Terrane, Northeast China. *Journal of Earth Sciences*, Nagoya University, 38: 49-78.
- Yang Q. & Pessagno E. A. Jr 1989. — Upper Tithonian Vallupinae (Radiolaria) from the Taman Formation, east-central Mexico. *Micropaleontology*, New York 35 (2): 114-134, 4 pl.
- Yao A. 1972. — Radiolarian fauna from the Mino Belt in the Northern part of the Inuyama area, Central Japan. Part I: Spongosaturnalids. *Journal of Geosciences, Osaka City University*, Osaka 15 (2): 21-64.
- 1979. — Radiolarian Fauna from the Mino Belt in the Northern Part of the Inuyama area, Central Japan. Part II: Nassellaria 1. *Journal of Geosciences, Osaka City University*, Osaka 22 (2): 21-72.
- 1981. — Triassic and Jurassic Radiolarians from Southwest Japan, in Baumgartner P. O., Bjorklund K. R. Caulet J.-P., De Wever P., Kellogg D., Labracherie M., Nakaseko K., Nishimura A., Schaaf A., Schmidt-Effing R., Yao A., EURO-RAD II, 1980 - Second European Meeting of Radiolarists: Current Research on Cenozoic and Mesozoic Radiolarians, *Ecoglae Geologicae Helveticae*, Basel 74 (3): 1049-1050.
- 1982a. — Middle Triassic to Early Jurassic Radiolarians from the Inuyama Area, Central Japan. *Journal of Geosciences, Osaka City University*, Osaka 25 (4): 53-70.
- 1982b. — Radiolarian time-scale of the Triassic and the Jurassic. *Chikyū (Earth)* 4: 428-433 [in Japanese].
- 1983. — Late Paleozoic and Mesozoic Radiolarians from Southwest Japan, in Iijima A., Hein J. R. & Siever R. (eds), Siliceous Deposits in the Pacific Region, *Development of Sedimentology*, Elsevier, Amsterdam 36: 361-376.
- 1986. — Geological age of Jurassic radiolarian zones in Japan and their international correlations, in Recent Progress of Research on Radiolarians and Radiolarian Terranes of Japan, *News of Osaka Micropaleontologists*, Special Volume, Osaka 7: 63-74 [in Japanese with English abstract].
- Yao A. & Ichikawa K. 1969. — A study on Paleozoic and Mesozoic Radiolaria: Method of individual separation and observation of the surface features. *Journal of Fossil Research (Fossil Club Bulletins)* 2: 15-19 [in Japanese].
- Yao A., Marsuda T. & Isozaki Y. 1980. — Triassic and Jurassic Radiolarians from the Inuyama area, Central Japan. *Journal of Geosciences, Osaka City University*, Osaka 23: 135-154.
- Yao A., Matsuoka A. & Nakatani T. 1982. — Triassic and Jurassic radiolarian assemblages in Southwest Japan. *News of Osaka Micropaleontologists*, Special Volume, Osaka 5: 27-43 [in Japanese with English abstract].
- Yeh K.-H. 1989. — Studies of Radiolaria from the Fields Creek Formation, east-central Oregon, U.S.A. *Bulletin of the National Museum of Natural Science*, Taiwan 1: 43-109, 14 pls.
- Yeh K.-H. 1990. — Taxonomic studies of radiolaria from Busuanga Island, Philippines. *Bulletin of the National Museum of Natural Science*, Taiwan 2: 1-63.
- Yeh K.-H. 1992. — Triassic radiolaria from Uason Island, Philippines. *Bulletin of the National Museum of Natural Science*, Taiwan 3: 51-91.
- Yeh K. H. & Cheng Y.-N. 1996. — An Upper Triassic (Rhaetian) radiolarian assemblage from Busuanga Island, Philippines. *Bulletin of the National Museum of Natural Science*, Taiwan 7: 1-44.
- Yeh K. Y. 1987. — Taxonomic studies of Lower Jurassic Radiolaria from East-Central Oregon. *National Museum of Natural Science*, Special Publication, Taichung 2: 1-169.
- 1988. — Some Important Triassic Radiolaria from

- the Fields Creek Formation, East-Central Oregon, in Schmidt-Effing R. & Braun A. (eds), First International Conference on Radiolaria (EURO-RAD V), 21 to 24 July 1988 (abstract), *Geologica et Palaeontologica*, Marburg: 42.
- Yehara S. 1926. — On the Monobegawa and Shimantogawa Series in Southern Shikoku. *Journal of Geography*, Tokyo, 38, 443: 1-10.
- 1927. — Faunal and stratigraphic study on the Sakawa basin, Shikoku. *Japan Journal of Geology and Geography*, Tokyo 5 (1-2): 1-40.
- Yigang W. & Yujing W. 1976. — Discussion on the Jiabula Formation and the discovery of Longzi Lower Jurassic in Southern Xizang, China. *Scientia Geologica Sinica*, Beijing 4 (2): 149-156.
- Yokota S. & Sano H. 1986. — Radiolarian fossils from the Middle Jurassic Ammonites-bearing formation of the Bisha, Yatsushiro district, Kumamoto Prefecture. *News of Osaka Micropaleontologists*, Special Volume, Osaka 7: 53-58 [in Japanese with English abstract].
- Yoshida H. 1986. — Upper Triassic to Lower Jurassic radiolarian biostratigraphy in Kagamigahara City, Gifu Prefecture, Central Japan. *Journal of Earth Sciences, Nagoya University*, Nagoya 34: 1-21.
- Yoshimura M., Kido S. & Hattori I. 1982. — Styliolitic cherts and Radiolarian fossils in the Imajo Area of the Nanjo Massif, Fukui Prefecture, Central Japan. *Science Report, Geological Laboratory, Fukui University*, 2, 31: 65-77 [in Japanese with English abstract].
- Zagorcev L., Mavridis A., Budurov K., Tikhomirova L. B., Trifonova E., Scourtsis-Coroncou V. & Manacos C. 1989. — New stratigraphic data on Lower Drimos Limestones (Upper Triassic) from the section of Karpenission, Pindos-Olonos Zone (Eurytania, Greece). *Geologica Balcanica*, Sofia, 19, 5: 3-14.
- Zagorcev L. S. & Tikhomirova L. B. 1986. — Stratigraphy of the Trekljano Group (S.W. Bulgaria). *Geologica Balcanica*, Sofia, 16, 3: 33-44.
- Zhamoida A. I. 1958. — Rukovodyashchie kompleksey i nekotorye osobennosti fauny radiolyarii verkhnego paleozoya i nihnego mezozoya olgatyukhiskogo raiona [Main assemblages and some peculiarities of the radiolarian fauna from the late Paleozoic and early Mesozoic of the Olga-Tetiukh area]. *Informatsionnyi Sbornik VSEGEI*, n° 5: 8-18.
- 1961. — O stratigraficheskom znachenii fragmentov skeletov nekotorykh mezozoiskikh radiolyarii pri izuchenii ikh v sblifakh [On the stratigraphical significance of the skeleton fragments of some Mesozoic radiolarians for their study in thin sections]. *Vsesoyuznyi Nauchno-Issledovatel'skii Geologicheskii Institut (VSEGEI). Informatsionnyi Sbornik, Paleontologiya i Stratigrafiya*, Leningrad 47: 23-36.
- 1968. — Novye mezozoiskie radiolyarii Sikhote-Alinia i nizhnevo Priamuria [New Mesozoic radiolarians in Sikhote Alin and the Lower Pre-Amur]. *Novye vidy drvenikh rastenii i bespozvonochnykh SSSR, Trudy Vsesoyuznogo Ordena Lenina Nauchno-Issledovatel'skogo Geologicheskogo Instituta (VSEGEI), Izdatel'stvo "Nedra"*, Moscow 2 (1): 162-177.
- 1969. — Pervye rezultaty izucheniya mezozoiskikh radiolyarii Sakhilna [First results of the study of Mesozoic Radiolarians on Sakhalin]. *Lvovskoe Geologicheskoe Obschestvo, Iskopaemye i Sovremennye Radiolyarii*, Lvov: 17-24.
- 1972. — Biostratigrafiya mezozoiskikh kremnistykh tolsheh vostoka SSSR na osnove izucheniya radiolyarii [Biostratigraphy of the Mesozoic siliceous strata of the East of the USSR, as based on the study of Radiolarians]. *Trudy Vsesoyuznogo Ordena Lenina Nauchno-Issledovatel'skogo Geologicheskogo Instituta (VSEGEI)*, Leningrad, new serie 183: 1-199.
- 1975. — About Systematic and Stratigraphy Radiolaria. in Publication of the Ministry of Geology, VSEGEI, T. 226, 106 p. [in Russian].
- 1981. — Some problems about Radiolarians, in Krashneninikov V. A. (ed.), *Sistematika, Evolyutsiya i Stratigraficheskoe Znachenie Radiolyarii* [Systematic, Evolution and Stratigraphic Importance of Radiolaria], *Academy of Sciences of USSR, Nauka*, Moscow: 5-9 [in Russian].
- Zhamoida A. I. & Kazintsova L. I. 1981. — Stratigraphic importance of Mesozoic radiolarians 1967-1978, in Krashneninikov V. A. (ed.), *Sistematika, Evolyutsiya i Stratigraficheskoe Znachenie Radiolyarii* [Systematic, Evolution and Stratigraphic Importance of Radiolaria], *Academy of Sciences of USSR, Nauka*, Moscow: 49-58.
- Zhamoida A. I., Kazintsova L. I. & Tikhomirova L. B. 1976. — Kompleksey mezozoiskikh radiolyarii Malogo Kavkaza [Complexes of Mesozoic Radiolarians of the Lesser Caucasus]. *Izvestiya Akademii Nauk SSSR, Seriya Geologicheskaya* 2: 156-160.
- Zhiyuan T. & Tsorun T. 1976. — Studies on the Radiolaria of the East China Sea. *Studia Marina Sinica* 11: 217-310.
- Zütel K. A. 1876. — Über einige fossile Radiolaren aus der norddeutschen Kreide. *Zeitschrift der Deutschen Geologischen Gesellschaft*, Berlin 28: 75-86.

Submitted for publication on 15 July 1996;
accepted on 15 December 1996.

TABLE 2. — Publications on Mesozoic radiolarians, with indications of the localities, involved ages and main topic (except publications dealing with European part of the former Soviet Union, see table 1).

LOCATION	AGE	TOPIC	AUTHOR
	Czc Mzc	Evolu.	Kellogg D. E. 1982
	Pzc Mzc	Gener. Strati Evolu.	Kling S. A. 1978
	Mzc Czc	Taxon. DSDP14	Petrushevskaya M. G. & Kozlova G. E. 1972
	Mzc	Taxon. Skelet.	Nakaseko K. & Yao A. 1973
	Czc Mzc?		Levykina I. E. 1984
	Czc Mzc Pzc	Taxon. Gener.	Moore R. C. 1954
	E.Cret.-L.Jur.		Khabakov A. V. 1937
	Cret.	Taxon. N.Sp.	Foreman H. P. 1966
	Mzc	Skelet.	Dellandre G. 1964
	Tr.	Taxon. N.Sp. Evolu.	Dumitrica P. 1978a
	Mzc Czc	General	Dellandre G. 1953
	Mzc	General Skelet. Morphogen.	Dellandre G. 1960
	Czc Mzc	Skelet. Growth Morphogen.	Dellandre G. & Dellandre-Rigaud M. 1958
	Mzc	Taxon. N.Sp.	Kozur H. 1979
	PCzc? Mzc?	Plankton	Meyen F. J. 1896
	Mzc Czc	Taxon. Evolu. Skelet.	Petrushevskaya M. G. 1981
	Mzc Czc	Taxon. Skelet.	Petrushevskaya M. G. 1986
	Mzc	DSDP26	Pessagno E. A. Jr & Michael F. Y. 1974
	Pzc-Czc	General Taxon. Biol. Strati	Gott R. M. & Merinfeld E. G. 1979
	Czc Mzc Pzc	Sedim. Review of papers	Hill W. 1912
	Mzc Czc	Taxon. Skelet.	Petrushevskaya M. G. <i>et al.</i> 1976
		Taxon. Skelet.	Petrushevskaya M. G. 1979
	Czc	Taxon. Skelet.	Petrushevskaya M. G. 1975b
	Czc Mzc	Skeleton Ontogen. Shape	Nishimura H. 1986
	Mzc Pzc	Taxon. Skelet.	Petrushevskaya M. G. 1975a
	L.Cret.	DSDP29	Pessagno E. A. Jr 1975
	Mzc Czc	Taxon.	Petrushevskaya M. G. 1975c
	Jur.Czc.	Taxon.	Dumitrica P. 1988
	Late Cret.	Taxon. Evolu.	Empson-Morin K. M. 1982
	Cret.	Taxon. Strati	Sanfilippo A. & Riedel W. R. 1985
	M.Cret. Recent	Skelet.	Thurrow J. & Anderson R. O. 1986
	Jur.	Taxon. Skelet.	Takemura A. 1986
	Mzc Czc	Taxon.	Riedel W.R. 1967a
	Czc	Taxon.	Riedel W. R. 1967b
	Mzc	Strati Taxon.	Tshedia D. M. 1985
	Cret.	DSDP7	Foreman H. P. 1971
	Mzc Cret.	Strati Taxon. DSDP20	Foreman H. P. 1973b
	Cret. Czc	Taxon. Evolu.	Dumitrica P. 1985
	Pzc-Czc	Taxon.	Dumitrica P. 1984
		Technic. SEM Taxon.	De Wever P. 1980
	Mzc	Evolu. Biol.	Doderline L. 1887
	Pzc-Czc	Gener. Taxon.	Dumitrica P. 1979
	Pzc Mzc	General Taxon.	Foreman H. P. & Riedel W. R. 1972
	Cret.-Czc	Taxon. Strati DSDP10	Foreman H. P. 1973a
		Taxon.	Cordey F. <i>et al.</i> 1988
	Czc Mzc?	DSDP1	Ewing M. <i>et al.</i> 1969
	Mzc Czc	Taxon. Gener.	Dellandre-Rigaud M. 1969
Africa Algeria	Cret. Alb.-Cenom.		Magné J. & Sigal J. 1953
Amer. N.England, Austral. California	Pzc Mzc		Blake M. C. Jr & Murchey B.L. 1988

LOCATION	AGE	TOPIC	AUTHOR
Amer.C.	Mzc	Taxon. DSDP	Pessagno E. A. Jr & Longoria T. J. F. 1973
Amer.C.	Earl.Cret. Mzc		Alcozer V. M. D. 1960
Amer.C. Calif. Mexico (B. California)	L.Tr.	Strati Taxon.	Pessagno E. A. Jr <i>et al.</i> 1979
Amer.C. Carib. Bahama	Mzc	DSDP1	Pessagno E. A. Jr 1969
Amer.C. Carib. Cuba	Mzc		Vishnevskaya V. S. <i>et al.</i> 1982
Amer.C. Carib. Venezuela	Jur.-Cret.	Strati Ophiol.	Beck C. <i>et al.</i> 1984
Amer.C. C. Rica, Tethys, Greece, Italy	L.Jur.-Earl.Cret	DSDP	Devos I. 1983
Amer.C. Costa Rica Indian Tethys Greece Italy (Stolly)	Jur.-Cret.	DSDP Taxon. Strati	Origlia-Devos I. 1983
Amer.C. Costa Rica,	Earl.-Mid.Jur.	Strati Taxon.	De Wever P. <i>et al.</i> 1985a
Amer.C. Costa Rica		Strati Ophiol.	Bourgeois J. <i>et al.</i> 1982
Amer.C. Costa Rica			Witberg H. <i>et al.</i> 1982
Amer.C. Costa Rica Nicoya		Strati Ophiol. Radt	Schmidt-Effing R. 1980
Amer.C. Costa Rica Nicoya	Jur.-Cret.	Strati Ophiol.	Schmidt-Effing R. 1979
Amer.C. Costa Rica Nicoya	Cret.	Strati	Schmidt-Effing R. <i>et al.</i> 1980
Amer.C. Costa Rica Nicoya	Cret.	Strati Radt	Schmidt-Effing R. 1980
Amer.C. Costa Rica, Nicoya		Radt Ophiol. Sedim.	Gursky H.-J. & Schmidt-Effing R. 1983
Amer.C. Costa Rica Nicoya	Jur.-Cret.	Radt Ophiol.	Steinberg E. 1988
Amer.C. Costa Rica Nicoya	M.-Cret.	Strati	Schmidt-Effing R. 1980
Amer.C. Costa Rica Nicoya	Mzc	Ophiol.	Gursky H.-J. 1988
Amer.C. Costa Rica NW, Nicoya,	Jur.-Cret.	Strati Sedim.	Gursky H.-J. <i>et al.</i> 1982
Amer.C. Cuba.	Campan.	Strati	Florez Albin E. 1988
Amer.C. E.Mexico.	Tithonian	Taxon.	Yang Q & Pessagno E. A. 1989
Amer.C. Puerto Rico	Jur.-E.Cret.	Taxon. Strati	Mattson P. H. & Pessagno E. A. Jr 1979
Amer.C. Tethys	Jur.-Cret.	Radt	De Wever P. <i>et al.</i> 1986a
Amer.C. W.Atlant. Blake Bahama	M.Jur.		Yamamoto H. <i>et al.</i> 1985
Amer.N.	Jur.	Taxon.	Pessagno E. A. Jr <i>et al.</i> 1989
Amer.N.	Tr.	Biozon. Taxon. Strati	Blome C. D. 1984b
Amer.N.	Jur.	Strati Zones	Pessagno E. A. Jr <i>et al.</i> 1987
Amer.N.	Mzc	Taxon. Strati Gener.	Campbell A. S. & Moore R. C. 1954
Amer.N. Alaska	Tr.	Biostr.	Blome C. D. <i>et al.</i> 1989
Amer.N. Alaska. USA	Earl.Mzc	Paleogeog. Envir.	Blome C. D. 1987
Amer.N. Calif. Franciscan	Jur.-Cret.	Strati	Davis E. F. 1918
Amer.N. Calif. ex-USSR Asia Japan Tethys Europe	Mzc	Bioz.	Vishnevskaya V. S. 1985
Amer.N. Calif.	Jur.-Cret.	Taxon.	Pessagno E. A. Jr 1973
Amer.N. Calif.	Cret.	Taxon. Strati	Foreman H. P. 1968
	L.Maastrichtian		
Amer.N. Calif.	L.Jur.	Ophiol.	McLaughlin R. J. & Pessagno E. A. Jr 1978
Amer.N. Calif.	Czc Mzc?	Sedim.	Hinde G. J. 1894
Amer.N. Calif.	Tr.-Cret.	Taxon.	Pessagno E. A. Jr 1977c
Amer.N. Calif.	L.Cret.	Taxon.	Pessagno E. A. Jr 1971a
Amer.N. Calif.	Jur.-Cret.	Taxon.	Pessagno E. A. Jr 1971b
Carib. Bla.-Bahama Gr.Valley			
Amer.N. Calif. Coast Ranges	L.Jur.-Cret.	Strati Taxon.	Pessagno E. A. Jr 1977a
Amer.N. Calif. Franciscan		Taxon.	Riedel W. R. & Schlocker J. 1956
Amer.N. Calif. Franciscan Gr.Valley			Seiders V. M. <i>et al.</i> 1979
Amer.N. Calif. Franciscan	Jur.	Radt Ophiol. Strati Lithol.	Murchey B. 1984
Amer.N. Calif. Gr.Valley Blake-Bahama	Cret.	Taxon.	Pessagno E. A. Jr 1972
Amer.N. Calif. Gr.Valley California	L.Cret.	Strati Taxon.	Pessagno E. A. Jr 1976
Amer.N. Calif. Gr.Valley Franciscan	E.Cret.	Strati Taxon.	Pessagno E. A. Jr 1977b
Amer.N. Calif. Great Valley	L.Cret.	Taxon.	Pessagno E. A. Jr 1970

LOCATION	AGE	TOPIC	AUTHOR
Amer.N. Calif. Klamath	Penn.-Tr.	N.Sp. Paleoenvir.	Noble P. & Renne P. R. 1988
Amer.N. Calif. S.Klamath		Strati	Irwin W. P. <i>et al.</i> 1977
Amer.N. Calif. Tethys Europe (Italy, Spain, France)	Pzc-Czc	Skelet.	De Wever P. 1986
Amer.N. California,	M.-L.Jur.	Taxon.	Pessagno E. A. Jr & Blome C. D. 1982
Amer.N. California	L.Cret.	Taxon.	Campbell A. S. & Clark B. L. 1944
Amer.N. Canada (Br.Columb.)	Devon.-Jur.	Taxon.	Cordey F. & De Wever P. 1988
Amer.N. Can. (Br.Columb.) CacheCreek	Jur.	Strati	Cordey F. <i>et al.</i> 1987b
Amer.N. Can. (Br.Columb.) CacheCreek	Perm.-Jur.	Strati	Cordey F. <i>et al.</i> 1987a
Amer.N. Canada Alberta	Cret.		Wall J. H. 1975
Amer.N. Canada Queen Charlotte	Tr. (L. Nor.)		Carter E. S. 1988
Amer.N. Canada Queen Charlotte	Eart.-Mid.Jur.	Biostr. Taxon.	Carter E. S. <i>et al.</i> 1988
Amer.N. Canada Queen Charlotte	Eart.-Mid.Jur.	Biostr. Taxon.	Carter E. S. 1985
Amer.N. Can. Queen Charlotte (Kunga)	L.Tr.	Strati	Carter E. S. <i>et al.</i> 1989
Amer.N. Colorado, Kansas	Cret.	Strati Taxon.	Bergstresser T. J. 1983
Amer.N. E. Alaska	L.Tr.	NSG N.Sp.	Robinson B. E. & Pessagno E. A. Jr 1988
Amer.N. E. Atlantic Europe	Cret.	Strati Taxon.	Foreman H. P. 1977
Amer.N. E. Oregon (Blue-Mts E. Oregon)	Pzc-Mzc	Environ. Biostr.	Blome C. D. <i>et al.</i> 1986
Amer.N. E. Oregon W. Idaho.	Tr.-Cret.	Biogeo. Ecolo. Taxon.	Pessagno E. A. Jr & Blome C. D. 1986
Amer.N. E.-C. Oregon	Lias.-Dog.	Taxon. Cladist.	MacLeod N. 1988
Amer.N. East-C. Oregon	Tr.-E. Jur.	Taxon.	Yeh K. Y. 1987
Amer.N. East-C. Oregon.	Mzc		Yeh K.-H. 1989
Amer.N. East-C. Oregon.	Tr.		Yeh K.-Y. 1988
Amer.N. Europe E. Atlantic	Cret.	Strati Taxon.	Foreman H.-P. 1977
Amer.N. NW. Nevada	Jur.-Cret.	Ophiol. Strati	Sosson M. <i>et al.</i> 1984
Amer.N. Oregon	L.Tr.	Taxon. Strati	Blome C. D. 1983
Amer.N. Oregon British Columbia.	L.Tr.-Jur.	Taxon. Strati	Pessagno E. A. Jr & Blome C. D. 1980
Amer.N. S. Alaska E. Oregon.	Mid.Jur. (Callov.)	Taxon. Strati	Blome C. D. 1984a
Amer.N. SW Oregon Strati	Mzc		Carayon V. <i>et al.</i> 1984
Amer.N. SW Oregon Klamath	Tr.	Strati Ophiol.	Roure F. & De Wever P. 1983
Amer.N. USA Canada	Jur.	Taxon.	Pessagno E. A. Jr <i>et al.</i> 1986
Amer.N. W. Calif.	L.Mzc		Seiders V. M. & Blome C. D. 1988
Amer.N.W. Amer.N. Calif.	L.Jur.	Strati	Pessagno E. A. Jr <i>et al.</i> 1984
Amer.S. Argentina (Neuquén)	Jur.-Cret.	Biostr.	Pujana I. 1988
Amer.S. Feuerland	Cret.		Richter M. 1925
Amer.S. Tripoli (Chile)	Czc Mzc	Taxon. N.Sp. Strati	Frenquelli J. 1941
Asia Austral.		Sedim.	Kobayashi T. 1944
Asia China Himalaya Tibet Gyangze S.Xizang (Tibet)	Cret.		Wu H.-R. & Li H. S. 1982
Asia China Himalaya Tibet Xizang	Cret.		Wu Hao-ruo <i>et al.</i> 1977
Asia China Himalaya Tibet Yarlung Zangpo			Wu Hao-ruo 1980
Asia China Japan Sikhote-Alin	Tr.-Jur.		Kojima S. 1989
Asia China S Tibet	L.Jur.-E.Cret.		Wu H. 1988
Asia China S.Xizang	Tr.-E. Jur.	Taxon.	Yigang W. & Yujing W. 1976
Asia China S.Xizang	Mzc?	Plankton	Wang Yujing & Sheng Jinzhang 1982
Asia China Sea			Tan Zh. & Su X. 1982
Asia China Tibet Himalaya Zangbo Xizang	Cret.	Ophiol.	Wu Hao-ruo & Wanming D. 1980
Asia China Tibet S.Xizang	Cret. Cenom.	Taxon. N.Sp.	Wu H. R. 1986
Asia China Tibet Xizang	Jur. E.Tithon.	Taxon.	Li H. S. 1986
Asia China Tibet Xizang	E. Jur. (L.Pliensb)		Li H. S. 1968

LOCATION	AGE	TOPIC	AUTHOR
Asia China Xish Island		Taxon. N.Sp.	Xinghui S. 1982
Asia China.E		Strati	Zhiyuan T. & Tsorun T. 1976
Asia China.NE.	Tr.-Jur.		Kojima S. & Mizutani S. 1987
Asia China.NE	Tr.-Jur.		Satçrı K. & Mizutani S. 1987
Asia ex-USSR Crimea		Ecolo.	Tshedla D. M. 1981
Asia ex-USSR E.Sakhalin	Tr.	Strati	Bragin N. Ju. 1985
Asia ex-USSR NW.Uzbek.	Mzc?		Averburg N. V. & Kestner F. F. 1973
Asia Himalaya Tibet, Ladakh	Mzc Eoc.	Biostr. Strati Ophiol.	Colchen M. <i>et al.</i> 1987
Asia India		Ophiol.	Ghosh S. <i>et al.</i> 1984
Asia Indones. Borneo Molukken	Jur.-Cret.		Tan Sin-Hok 1927
Asia Indones.		Strati Taxon.	Tan Sin Hok 1931
Asia Japan		Strati	Ichikawa K. 1945
Asia Japan	Mzc? Pzc? Czc?	Diagen. Silica	Nagata K. 1986
Asia Japan	L.Jur.-Cret.	Taxon. Strati	Nakaseko K. & Nishimura A. 1981
Asia Japan	L.Tr.	Taxon. Strati	Nakaseko K. & Nishimura A. 1980
Asia Japan	L.Jur.	Taxon. Strati	Matsuoka A. 1984a
Asia Japan	Cret.	Taxon. Strati	Nakaseko K. <i>et al.</i> 1979a, b
Asia Japan		Sedim. Melange Strati	Nakazawa K. <i>et al.</i> 1983b
Asia Japan	Gen.geol.	Strati	Nakaseko K. <i>et al.</i> 1983
Asia Japan	L.Tr.-E.Jur.	Biostrl	Igo H. & Nishimura H. 1984
Asia Japan	Jur.	Zonation Strati	Matsuoka A. & Yao A. 1986
Asia Japan	Czc Mzc		Kobayashi T. & Kimura T. 1944a
Asia Japan	Jur.-Cret.	Taxon. N.Sp.	Ichikawa K. & Yao A. 1976
Asia Japan	Mzc	Strati	Ichikawa K. 1986
Asia Japan	Pzc-Czc		Ichikawa K. 1953
Asia Japan	Permo-Tr.	Evolu.	Kobayashi T. & Kimura T. 1944b
Asia Japan	Mzc		Mizutani S. 1987
Asia Japan	Tr.-Jur.		Kido S. 1982
Asia Japan	Mzc Pzc	Gener.	Kimura T. 1944c
Asia Japan	Tr.-Cret.	Sedim. Strati	Matsuoka A. 1983b
Asia Japan	Perm.-Tr.	Strati	Koike T. <i>et al.</i> 1974
Asia Japan	Mzc? Czc	Strati	Nakaseko K. 1979b
Asia Japan	Czc	Geol. Strati	Nakaseko K. <i>et al.</i> 1979
Asia Japan	Lias.	Strati	Isozaki Y. & Matsuda T. 1985
Asia Japan	Cret.	Strati Correl.	Nakaseko K. 1979
Asia Japan	Jur.	Strati Taxon.	Isozaki Y. <i>et al.</i> 1981
Asia Japan	Tr.-Jur.	Taxon.	Yao A. & Ichikawa K. 1969
Asia Japan	Jur.-Cret.	Extinc. Taxon. Strati	Matsuoka A. 1985a
Asia Japan	Jur.	Biostr.	Yao A. 1986
Asia Japan			Sugano K. & Nakaseko K. 1970
Asia Japan	Jur.	Environ.	Sunouchi H. <i>et al.</i> 1982
Asia Japan	Tr.-Jur.	Strati Taxon.	Yao A. 1982b
Asia Japan	L.Cret-Czc	Strati	Nakaseko K. <i>et al.</i> 1965
Asia Japan			Kimura T. 1944a
Asia Japan	Jur.	Taxon. Strati	Mizutani S. <i>et al.</i> 1984
Asia Japan	Jur.-Cret.	Strati	Fujimoto H. 1933b
Asia Japan	Cret.		Murata M. <i>et al.</i> 1982
Asia Japan	Carboniferous-Jur.	Strati	Naka T. & Ishiga H. 1987
Asia Japan	Tr.-Jur.	Silica Geoch.	Kakuwa Y. 1987
Asia Japan	Pzc-Mzc	Strati	Koike T. & Takashima K. 1983
Asia Japan		History	Sugano K. 1975
Asia Japan	Mzc		Okimura Y. <i>et al.</i> 1986

LOCATION	AGE	TOPIC	AUTHOR
Asia Japan	Jur.	Taxon. Strati	Wakita K. 1982
Asia Japan		Strati	Suzuki J. 1939
Asia Japan	Jur.	Taxon. Evolu.	Takemura A. & Nakaseko K. 1983
Asia Japan	Mzc	Sedim.	Sugano K. 1986
Asia Japan	Tr.	Taxon.	Sato T. <i>et al.</i> 1982
Asia Japan		Strati Plankton	Takemura A. 1980
Asia Japan	Jur.		Sashida K. <i>et al.</i> 1982a
Asia Japan	E.Jur.		Sashida K. <i>et al.</i> 1986
Asia Japan	Tr.-Jur.	Taxon.	Sato T. & Nishizono Y. 1983
Asia Japan	L.Cret.	Geol.	Kurimoto C. 1982
Asia Japan			Sugano K. & Nakaseko K. 1968
Asia Japan	Jur.	Taxon.	Takemura A. & Nakaseko K. 1982b
Asia Japan	Jur.	Taxon.	Takemura A. & Nakaseko K. 1982a
Asia Japan	Jur.	Strati	Matsuoka A. 1985a
Asia Japan	M.Jur.		Yokota S. & Sano H. 1986
Asia Japan	Tr.		Takashima K. & Koike T. 1982
Asia Japan	Jur.	Taxon.	Takemura A. & Nakaseko K. 1982c
Asia Japan	Jur.	Taxon. Strati	Matsuoka A. 1986c
Asia Japan	Mzc Czc	Strati Gen.geol.	Takeshita T. 1982
Asia Japan		Taxon. Skelet. Evolu.	Takemura A. & Nakaseko K. 1986
Asia Japan (Shikoku) Tethys Italy	Mid.Jur.-Earl.Cret.	Biostr. Strati	Aita Y. 1987
Asia Japan Boso Chiba	Czc? Mzc?		Kanomata N. & Iwashita F. 1964
Asia Japan Chichibu		Taxon. Strati	Fujimoto H. 1939
Asia Japan Chichibu	Mesozoic	Strati	Matsuoka A. 1986b
Asia Japan Chichibu	Pzc-Mzc	Gen.geol.	Owada K. & Saka Y. 1982
Asia Japan Chichibu Kyushu	Tr.-Jur.	Biostr.	Sato T. <i>et al.</i> 1986
Asia Japan E.Hokkaido	Cret.		Kiminami K. <i>et al.</i> 1983
Asia Japan E.Shikoku	Mzc	Strati	Ishida K. 1986a, b
Asia Japan Gifu	Tr. Jur.		Wakita K. & Isomi H. 1986
Asia Japan Hidaka	L.Cret.		Iwata K. & Kato Y. 1986
Asia Japan Hokkaido		Strati	Nagata K. 1982
Asia Japan Hokkaido	Jur.-E.Cret.	Strati	Ishizuka H. <i>et al.</i> 1984
Asia Japan Hokkaido	Cret.	Strati Gen.geol.	Takotani Y. 1982
Asia Japan Hokkaido	E.Cret.	Strati	Minoura N. <i>et al.</i> 1982
Asia Japan Hokkaido	Aptian		Okada H. <i>et al.</i> 1982
Asia Japan Hokkaido	Cret.-Czc (Mioc.-Quater.)	Strati	Nagata K. 1979
Asia Japan Hokkaido	Cret.		Tajika J. & Iwata K. 1983
Asia Japan Japan.C.	L.Cret.		Iyota N. <i>et al.</i> 1984
Asia Japan Kochi	Jur.	Biostr. Strati	Aita Y. 1982
Asia Japan Kyushu	Mzc		Nishizono Y. <i>et al.</i> 1982
Asia Japan Kyushu	Mzc	Sedim.	Nishizono Y. & Murata M. 1983
Asia Japan Kyushu	L.Jur.		Tanaka H. <i>et al.</i> 1985
Asia Japan N.Hokkaido	E.Cret.	Strati	Igo H. <i>et al.</i> 1987
Asia Japan N.Shimanto	Cret.		Okamura M. 1981
Asia Japan N.Shimanto	L.Cret.		Yamauchi M. 1982
Asia Japan N.Shimanto Shikoku	L.Jur.-Earl.Cret.	Strati	Aoki T. 1982
Asia Japan Okinawa	Cret.	Taxon.	Fujita H. 1983
Asia Japan Okinawa			Ujiiie H. & Hashimoto Y. 1983
Asia Japan S.Shikoku		Sedim. Gen.geol.	Yehara S. 1926
Asia Japan Sakawa Tosa			Kimura T. 1944b
Asia Japan Sambagawa	Jur.		Kobayashi T. 1941

LOCATION	AGE	TOPIC	AUTHOR
Asia Japan SE.Kanto	Czc? Mzc	Taxon. Strati	Ichikawa K. 1950
Asia Japan Shikoku	Mzc		Nakagawa C. & Nakaseko K. 1977
Asia Japan Shikoku	L.Jur.-Cret.	Strati	Nakagawa C. <i>et al.</i> 1980
Asia Japan Shikoku	Jur.	Biostr. Strati	Aita Y. 1985
Asia Japan Shikoku			Suyari K. & Kuwano Y. 1986
Asia Japan Shikoku	Jur.	Taxon. Strati	Matsuoka A. 1982a
Asia Japan Shikoku	Tr.-Jur.	Taxon.	Yehara S. 1927
Asia Japan Shikoku	Tr.-Jur.	Strati Sedim.	Ishida K. 1985
Asia Japan Shikoku	E.Cret.		Okamura M. & Lito H. 1982
Asia Japan Shikoku	Cret.		Okamura M. & Matsugi H. 1986
Asia Japan Shikoku	L.Cret.		Okamura M. <i>et al.</i> 1982
Asia Japan Shimanto	Cret.	Strati	Aoki T. & Tashiro M. 1982
Asia Japan Shimanto	Mzc		Suyari K. 1986a,b
Asia Japan Shimanto Shikoku	Mzc	Strati	Suyari K. & Yamasaki T. 1988
Asia Japan SW.Hokkaido	Jur.	Tecton.	Ishiga H. & Ishiyama D. 1987
Asia Japan Tethys	L.Jur.-Earl.Cret.		Aita Y. & Okada H. 1986
Asia Japan, Tethys Europe ex-USSR Amer.N. Calif.	Mzc	Bioz.	Vishnevskaya V. S. 1985
Asia Japan W.Shikoku. Chichibu	Jur.		Kashima N. 1986
Asia Japan.C.	Jur.	Taxon. Strati	Mizutani S. & Kido S. 1983
Asia Japan.C.	Tr.	Radt Sedim.	Sugisaki R. <i>et al.</i> 1982
Asia Japan.C.	E.Cret.		Wakita K. 1988
Asia Japan.C.			Otsuka T. 1986
Asia Japan.C.	Tr.-Jur.	Taxon.	Yao A. <i>et al.</i> 1980
Asia Japan.C.	E.Jur.	Taxon.	Sashida K. 1988
Asia Japan.C.	L.Tr.-Earl.Jur.	Biostr.	Yoshida H. 1986
Asia Japan.C.	M.Jur.	Biozon. Biostr.	Matsuoka A. 1988
Asia Japan.C.	Jur.	Taxon. Strati	Mizutani S. <i>et al.</i> 1982a
Asia Japan.C. (Mino terr.)	Jur. Mzc	Strati	Adachi M. 1982
Asia Japan.C. Fukui	Jur.		Hattori I. 1987
Asia Japan.C. Fukui	Lias.-Dog.		Hattori I. 1988
Asia Japan.C. Gifu	Mzc	Sedim.	Wakita K. & Okamura Y. 1982
Asia Japan.C. Inuyama	Lias.	Taxon.	Hori R. & Yao A. 1988
Asia Japan.C. Inuyama	Earl.Jur.		Hori R. 1986
Asia Japan.C. Kanto	Cret.		Hisada K.-I. <i>et al.</i> 1986
Asia Japan.C. Kanto	Jur.-Cret.		Hisada K.-I & Kishida Y. 1986
Asia Japan.C. Mino	Mzc	Genesis Silica Radt Environ.	Hattori I. 1984
Asia Japan.C. Sambagawa		Sedim. Diagen.	Huzimoto H. 1938
Asia Japan.C.	Perm.-Jur.		Kojima S. 1982
Asia Japan.C.	Tr.	Taxon. Strati	Mizutani S. <i>et al.</i> 1981b
Asia Japan.C.	L.Tr.-E.Jur.	Strati	Kishida Y. & Hisada K. 1985
Asia Japan.C.	M.Tr.-E.Jur.	Taxon.	Yao A. 1982a
Asia Japan.C.	Jur.	Sedim. Radt	Wakita K. 1983
Asia Japan.C.	L.Jur.-Cret.	Strati	Yamamoto H. 1983
Asia Japan.C.	Jur.	Gen.geol.	Wakita K. 1983
Asia Japan.C.		Strati	Kishida Y. & Hisada K. 1986
Asia Japan.C.	Jur.	Strati	Mizutani S. <i>et al.</i> 1981a
Asia Japan.C.	Cret.	Taxon.	Sashida K. <i>et al.</i> 1984
Asia Japan.C.	Mzc	Sedim. Taxon.	Yoshimura M. <i>et al.</i> 1982
Asia Japan.C.	Tr.-Jur.	Taxon.	Yao A. 1972
Asia Japan.C.	Tr.-Jur.	Taxon.	Yao A. 1979
Asia Japan.C.	E.Tr.	Taxon.	Sashida K. 1983

LOCATION	AGE	TOPIC	AUTHOR
Asia Japan.C.	Tr.-Jur.	Taxon. Strati	Mizutani S. & Koike T. 1982
Asia Japan.C.	Cret.	Taxon. Strati	Iwasaki T. <i>et al.</i> 1984
Asia Japan.C.		Strati	Kido S. <i>et al.</i> 1982
Asia Japan.C.	Jur.	Strati	Mizutani S. 1981
Asia Japan.C.	L.Tr.-Mid.Jur.	Strati Tecto.	Hattori I. & Yoshimura M. 1983
Asia Japan.N. Hokkaido	L.Jur.-E.Cret.	Taxon. N.Sp.	Kawabata K. 1988
Asia Japan.N. Hokkaido	L.Jur.	Ophiol.	Ishizuka H. <i>et al.</i> 1983
Asia Japan N. Hokkaido	E.Cret.		Kanie Y. <i>et al.</i> 1981
Asia Japan.N. NE.Hokkaido	Jur.-Cret.		Iwata K. <i>et al.</i> 1983a,b
Asia Japan NE.	Mzc		Matsuoka A. 1987
Asia Japan.SW.	Perm.-Tr.		Ishiga H. & Kusu T. 1986
Asia Japan.SW.	Tr.-Jur.	Taxon.	Yao A. <i>et al.</i> 1982
Asia Japan.SW.	Jur.		Saka Y. 1983
Asia Japan SW.	Tr.-Jur.	Taxon.	Yao A. 1983
Asia Japan. SW.	Mesozoic	Strati	Nakaseko K. 1981
Asia Japan.SW.	L.Jur.	Taxon. Strati	Matsuoka A. & Yao A. 1985
Asia Japan.SW.	Jur.	Strati	Matsuoka A. 1984b
Asia Japan.SW.	L.Tr.-Earl.Jur.	Biostr.	Hori R. 1988
Asia Japan.SW.	Jur.(Dog.)	Strati	Imoto N. <i>et al.</i> 1982
Asia Japan.SW.	Tr.-Jur.	Taxon.	Yao A. 1981
Asia Japan.SW.		Strati	Ichikawa K. <i>et al.</i> 1985
Asia Japan.SW.	Perm.	Envir.	Imoto N. 1984a
Asia Japan.SW.	Mzc	Envir. Radt	Imoto N. 1984b
Asia Japan.SW.	M.Jur.	Taxon. Strati	Matsuoka A. 1985b
Asia Japan.SW.	L.Tr.	Taxon. N.Sp.	Nakasako K. & Nishimura A. 1979
Asia Japan.SW.	Tr.-Jur.	Strati	Kishida Y. & Sugano K. 1982
Asia Japan.SW.	Permian		Isozaki Y. 1985
Asia Japan.SW.	Tr.	Taxon. Strati	Isozaki Y. & Matsuda T. 1980
Asia Japan.SW.	Tr.-Jur.	Strati	Matsuda T. & Isozaki Y. 1982
Asia Japan.SW.	Mid.L.Jur.	Taxon. Strati	Matsuoka A. 1982b
Asia Japan.SW.	Jur.	Strati	Hayasaka Y. <i>et al.</i> 1983
Asia Japan.SW.	Cret.	Envir.	Nakazawa K. <i>et al.</i> 1983a
Asia Japan.SW.	Mzc	Strati	Kamoi M. & Taketomi H. 1982
Asia Japan.SW. E.Shikoku		Gen.geol.	Yanai S. 1983
Asia Japan.SW. Kii	Cret.	Taxon. Strati	Matsuyama H. <i>et al.</i> 1982
Asia Japan.SW. Shikoku	L.Jur.	Taxon. Strati	Matsuoka A. 1986d
Asia Japan.SW. Shikoku	M.L.Jur.	Strati	Matsuoka A. 1983a
Asia Japan.SW. Shikoku Awaji	Czc Mzc		Yamasaki T. 1987
Asia Japan.SW. Shikoku	Tr.-Jur.	Strati	Ishida K. 1983
Asia Pacif. Indones. C.Celebes	Mzc		Hinde G. J. 1917
Atlant.		Taxon. DSDP	Riedel W.-R. 1971a
Atlant.	Cret.	Biostr.	Cita M. B. <i>et al.</i> 1970
Atlant.	M.Cret.	Sedim. Gen.geol. Strati	Schaaf A. 1985
Atlant.	Czc Mzc	Taxon.	Ehrenberg C. G. 1854
Atlant. Carib. (Bahamas)	Mid.Jur.-Earl.Cret.	Strati	Baumgartner P. O. 1983
Atlant. Carib. (La Desirade, Les Antilles)	Earl.Cret.		Boulysse P. <i>et al.</i> 1983
Atlant. Europe			Swain F. M. 1977
Atlant. Europe N.Sea.	L.Jur.-E.Cret.	Review Biostr.	Dyer R. & Copestake P. 1989
Atlant.C. Carib. Barbados	Mzc		Ehrenberg C. G. 1845
Atlant.NE. (off Africa)	Cret.	DSDP41	Foreman H. P. 1978b
Atlant.SE.	Cret.	DSDP40 Taxon. Strati	Foreman H. P. 1978a
Atlantic NE.Mediterr.	Cret.Quatern.	DSDP13 Taxon. Strati	Dumitrica P. 1973

LOCATION	AGE	TOPIC	AUTHOR
Atlantic E. Europe Amer.N.	Cret.	Strati Taxon.	Foreman H. P. 1977
Austral. Indones. New Guinea		Strati	Cresspin I. 1958
Canada (Queen-Chari.) Calif. E-C.Oregon	Lias. Dog.	Taxon.	Pessagno E. A. Jr & Whalen P. A. 1982
DSDP16	Mzc-Czc	Strati	Dinkelmann M. G. 1973
Europe Amer.N. E.Atlantic	Cret.	Strati Taxon.	Foreman H. P. 1977
Europe C. Poland	Cret.	Morphol.	Gorka H. 1988
Europe E.Atlantic Amer.N.	Cret.	Strati Taxon.	Foreman H. P. 1977
Europe England (Kimmeridge)	Jur. (Kimm.)	Boreal	Downie C. 1956
Europe France (Ardèche)	Late Tithon.	Taxon.	Cayeux L. 1896
Europe France (Larzac)	Mzc		Bergounioux F. M. 1950
Europe France (Paris Basin.) Belgium	Mzc	Chalk Sedim.	Cayeux L. 1897
Europe Italy Sicily	M.Jur.		Kito <i>et al.</i> 1990
Europe	Mzc	Taxon. Evolu. Strat. Techn.	De Wever P., Riedel W. <i>et al.</i> 1979b
Europe N.France	Jur. (Oxf.), Eoc.		Cayeux L. 1891
Europe N.Germany	Cret.	Taxon.	Zittel K. A. 1876
Europe Poland Krakau	L.Jur.		Wisniewski T. 1889
Europe Slovak. Czcek. (Meliata, Silica, Slovak Karst)	Tr.-Jur.	Ophiol. Radt	Dumitrica P. & Meilo J. 1982
Europe Turkey	Lias.	Taxon.	Pessagno E. A. Jr & Poisson A. 1981
ex-USSR	Mzc Czc?	Strati	Zhamoida A. I. 1975
ex-USSR	Mesozoic	Strati	Zhamoida A. I. 1972
ex-USSR	Pzc Mzc	Taxon.	Atanasieva M. S. 1986
ex-USSR	Mzc	Strati	Zhamoida A. I. 1981
ex-USSR	Mesozoic	Strati	Zhamoida A. I. 1961
ex-USSR	Mzc		Zhamoida A. I. & Kazintsova L. 1981
ex-USSR	Cret.	Biostr.	Kazintsova L. & Vishnevskaya V. 1988
ex-USSR	Cret.	Strati	Rundyova N. P. & Jinoridze N. 1975
ex-USSR	Cret.?	Taxon. N.Sp. Strati	Vishnevskaya V. S. 1985a
ex-USSR	Cret.	Taxon. Strati	Vishnevskaya V. S. 1981b
ex-USSR	Cret. Cenom.		Kazintsova L. I. 1981
ex-USSR	Mzc	Taxon. Skelet.	Vishnevskaya V. S. 1981c
ex-USSR Amer.N. Calif, Asia Japan, Tethys Europe	Mzc	Bioz.	Vishnevskaya V. S. 1985
ex-USSR Carpath. Ukrain.	Jur.	Strati	Lozynyak P. Yu. 1981
ex-USSR Carpath. Ukrain.	Cret.		Lozynyak P. Yu. 1975
ex-USSR E.-Sakhalin	Mzc	Strati	Zhamoida A. I. 1968
ex-USSR E.Sakhalin	L.Cret.		Kazintsova L. 1985
ex-USSR E.Siber. Sikhote-Alinj	Mzc		Eliseeva V. K. <i>et al.</i> 1976
ex-USSR Far East	Cret.	Taxon. Strati	Vishnevskaya V. S. 1981a
ex-USSR Greater & Lesser Caucasus	L.Jur.-Cret.	Biostr.	Vishnevskaya V. S. 1988a-c
ex-USSR Kamchatka			Runeva N. P. 1975
ex-USSR Kamchatka Asia			Vishnevskaya V. S. & Bernard V. V. 1986
ex-USSR Kazakhstan	Czc? Mzc?	Strati	Pupyshev N. A. & Lipman R. 1973
ex-USSR Koriak	Mzc	Strati	Bogdanov N. A. <i>et al.</i> 1982
ex-USSR Koryak	Mzc	Strati	Vishnevskaya V. S. <i>et al.</i> 1981
ex-USSR Koryaksk	Valanginian	Strati	Dundo O. P. & Zhamoida A. I. 1963
ex-USSR Lesser Caucasus	Mzc	Strati	Zhamoida A. I. <i>et al.</i> 1976
ex-USSR Mid.Asia	Mzc		Tshedia D. M. 1984
ex-USSR N.Pacif. Bering Polar	M.L.Cret.	Biozon. Strati Environ.	Vishnevskaya V. S. 1986
ex-USSR Olutor	Cret.-Czc	Strati	Vishnevskaya V. S. 1984a, b
ex-USSR Olyutor Koryak	Cret.		Vishnevskaya V. S. 1987a, b

LOCATION	AGE	TOPIC	AUTHOR
ex-USSR Russia	Pzc-Mzc	Gener.	Lipman R. Kh. 1976
ex-USSR Russia	Mzc	Evolu. Taxon.	Lipman R. Kh. 1975b
ex-USSR Russia	Jur.-Cret.	Strati	Lipman R. Kh. 1979b
ex-USSR Russia	Paleogene-L.Cret.	Strati	Lipman R. Kh. 1975a
ex-USSR Russia	L.Cret.	Taxon.	Lipman R. Kh. 1952
ex-USSR Russia Far East	Mzc		Lipman R. Kh. 1953
ex-USSR Russia W.Siberian Turgaisk N.Peri-Aral	L.Cret.		Lipman R. Kh. 1962
ex-USSR Sakalina Kamtchatka	Mzc?		Runeva N. P. 1961
ex-USSR Sakhalin	Mesozoic	Strati	Zhamoïda A. I. 1969
ex-USSR Siber. Russia	Czc Mzc		Lipman R. Kh. 1960
ex-USSR Sikhote	Mesozoic	Strati	Zhamoïda A. I. 1988
ex-USSR Sikhote-Alin.	Mzc		Tikhomirova L. B. 1975
ex-USSR Tadzhik	Cret. Campan.	Taxon. N.Sp.	Goltman E. V. 1984
ex-USSR Tadzhik	Cret. Senon.	Evolu.	Goltman E. V. & Babaeva B. 1985
ex-USSR Tadzhiksk	Cret. Senon.	Strati	Goltman E. V. 1981
	Quater.		
ex-USSR Tadzhiksk	Cret. (Campan. Maastr.)		Goltman E. V. 1973
ex-USSR Tadzhiksk		Strati	Goltman E. V. 1975
ex-USSR Tethys Carpath.	Earl.Cret.		Tikhomirova L. B. 1983
ex-USSR Tethys Caucasia	Jur.		Tikhomirova L. B. 1981
ex-USSR Timan-Ural	E.Kimm.		Kozlova G. E. 1971
ex-USSR Ukrain. Carpath.	Cret.		Kazintsova L. I. 1984
ex-USSR Urals	Cret.	Biozon.	Amon E. O. 1988
ex-USSR W.Siberia	L.Cret.-Eocene		Kozlova G. E. & Gorbovets A. 1966
ex-USSR W.Siberia	Cret. Turon.	Strati	Amon E. O. 1985
Indian S.	Cret.		Riedel W. R. & Sanfilippo A. 1974
Mediterr.	M.Cret.	Ecology Biostr.	Thurrow J. & Kuhnt W. 1988
Mid.East Israel	Earl.Cret.-Czc		Reiss Z. 1952
N.Africa	Turon.	Anoxy	Thurrow J. 1988
Pacif Indones.	Czc Mzc	Sedim.	Hinde G. J. 1897
Pacif.	Cret.	Strati Taxon.	Schaaf A. 1984b
Pacif.	Cret.	Strati Envir. Taxon.	Schaaf A. 1984a
Pacif.		Strati DSDP	Riedel W. R. 1981
Pacif. Amer.C.		Strati	White M. P. 1928
Pacif. Austral.	Pzc-Mzc	Tecton.	Flood P. G. 1988
Pacif. Austral.	Mzc	Sedim. Envir.	Fenton M. W. <i>et al.</i> 1982
Pacif. Australia	Czc? Mzc? Pzc?	Sedim.	Hinde G. J. 1893
Pacif. Indones. Borneo	Cret.		Hinde G. J. 1900
Pacif. Indones. Borneo	Tr.	Taxon.	Hinde G. J. 1908
Pacif. Indones. Celebes	Mzc?		Hojnos R. 1934
Pacif. Mariana Leg 60	Cret.	Strati DSDP	Kling S. A. 1982
Pacif. New Zealand	L.Tr.		Blome C. D. <i>et al.</i> 1987
Pacif. New Zealand	Jur.		Feary D. A. & Hill P. H. 1978
Pacif. New Zealand	Jur.-Cret.	Strati	Feary D. A. & Pessagno E. A. Jr 1980
Pacif.N.	Cret.	Strati Taxon. DSDP32	Foreman H. P. 1975
Pacif.SW.		Plankton Geograph.	Stevens G. R. 1980
Pacific Mid.	Cret. Campan.	Taxon. DSDP	Empson-Morin K. M. 1981
Tethys	Tr.-Cret.	Taxon. Evolu.	De Wever P. 1984b
Tethys	Jur.-Cret.	Taxon.	Fischli H. 1916
Tethys	Mid.Jur.-Earl.Cret.	Strati Taxon	Baumgartner P. O. 1984

LOCATION	AGE	TOPIC	AUTHOR
Tethys	Mzc-Czc	Taxon. Evolu.	Dumitrica P. 1983a
Tethys	Jur.	Environ. Sedim. Biostr	Baumgartner P. O. 1987
Tethys	Mid.-Tr.	Taxon. Evolu.	Dumitrica P. 1983b
Tethys	Tr.-Jur.	Taxon. N.Sp.	Kozur H. 1984b
Tethys	Tr.-Jur.	N.Sp. Taxon.	Kozur H. 1984d
Tethys	Mid.Tr.	Taxon. N.Sp.	Dumitrica P. 1982b
Tethys	Tr.	Taxon. N.Sp.	Dumitrica P. 1982a
Tethys		Diagen. Sedim. Silica	Hattori I. 1989
Tethys			Kito N. & De Wever P. 1988
Tethys	Tr.-Cret.	Taxon. Evolu. Phylogen.	De Wever P. & Origlia I. 1984
Tethys	Tr.-Cret.	Taxon. Evolu. Phylogen.	De Wever P. & Origlia I. 1983
Tethys Alpes France Ligurian	Jur.	Strati Ophiol.	De Wever P. & Caby R. 1981
Tethys Alps Austria	Jur.	Taxon. Strati	Muzávor S. N. X. 1977
Tethys Alps Austria N.Kalkalpen	L.Jur.-E.Cret.	Taxon. Strati	Holzer H.-L. 1980
Tethys Alps Europe	Mzc	Taxon.	Donofrjo D. A. & Mostler H. 1978
Tethys Alps Italy	Jur.-Cret.	Strati Taxon. Radt	Kocher R. N. 1981
Tethys Alps N Italy (Recoaro) Austria	L.Tr.	Taxon. N.Sp.	Lahm B. 1984
Tethys Alps NW.Carth. Klippen Z.	Mzc		Hojnos R. 1929
Tethys Amer.C.	Jur.-Cret.	Radt	De Wever P. <i>et al.</i> 1986a
Tethys Budva (Montenegro, Yugoslavia)	Jur.-Cret.	Taxon.	Gorican S. 1987
Tethys Bulgaria Trekljano S.W.Bulgaria			Zagorcev I. & Tikhomirova L. 1986
Tethys Carpath.	L.Jur.	Biostr.	Ozoldova L. & Petercakova M. 1987
Tethys Carpath. Klippen	Jur.		Ozoldova L. & Sykora M. 1984
Tethys Carpath. Klippen	L.Jur.		Ozoldova L. 1975
Tethys Carpath. Klippen	L.Jur.		Ozoldova L. 1979a
Tethys Carpath. Mediter. Lesser Caucas.	L.Jur.-Cret.		Tikhomirova L. B. 1984
Tethys Carpath. Slovak Klippen Podbiel	Jur.		Ozoldova L. 1979b
Tethys Cret.	Jur.	Taxon. Evolu.	De Wever P. 1983
Tethys Cyprus Oman	Jur.-Cret.	Strati	Blome C. D. & Irwin W. P. 1985
Tethys Cyprus. (Troodos)	Cret.-Czc	Strati Envir. Ophiol.	Robertson A. H. & Hudson J. D. 1974
Tethys E.Carthians S.Alps	Tr.	Taxon. N.Sp. Phylogen.	Dumitrica P. 1982c
Tethys E.Rhodope Bulgaria	E.Cret.	Strati	Lipman R. Kh. & Boyanov I. 1976
Tethys Europe	Cret.		Rüst D. 1887
Tethys Europe	Cret.	Taxon.	Rüst D. 1888
Tethys Europe	Tr.(Ladin.)	Taxon. N.Fam.	Kozur H. 1988
Tethys Europe	Tr.	Taxon.	Kozur H. & Mostler H. 1984
Tethys Europe	Jur.-Cret.	Taxon.	Rüst D. 1898
Tethys Europe	Jur.	Taxon.	Rüst D. 1885
Tethys Europe	Tr.	Taxon.	Rüst D. 1892
Tethys Europe (Italy, Spain, France) Amer.N. Calif.	Pzc-Czc	Skelet.	De Wever P. 1985
Tethys Europe Alps	Tr.	Taxon. N.Sp.	Kozur H. & Mostler H. 1981
Tethys Europe Alps	Oxf.-Kimm.	Strati Envir Taxon. Ophiol.	Schaaf A. <i>et al.</i> 1985
Tethys Europe Alps	Tr.-Jur.	Taxon. N.Sp.	Kozur H. & Mostler H. 1979a
Tethys Europe Alps	Tr.	Taxon. N.Sp.	Kozur H. & Mostler H. 1972
Tethys Europe Alps	Tr.-Jur.	Taxon.S.N.Sp.	Kozur H. & Mostler H. 1978
Tethys Europe Alps Austria	Tr.	Taxon. N.Sp.	Kozur H. & Mostler H. 1979b
Tethys Europe Alps Austria Kalkalpen Salzburg	L.Jur.	Sedim.	Steiger T. 1981
Tethys Europe Austria Salzburg	Earl.Lias.		Dunikowski E. V. 1882
Tethys Europe Carpath. Meliata-Serie	Pzc-Mzc	Strati	Kozur H. & Mock R 1973
Tethys Europe Corsica	Jur.-Cret.	Ophiol. Strati	De Wever P. <i>et al.</i> 1987b

LOCATION	AGE	TOPIC	AUTHOR
Tethys Europe Eastern Rhodops Bulgaria	Earl.Cret.		Boyanov I. & Lipman R. Kh. 1973
Tethys Europe ex-USSR Amer.N. Calif, Asia Japan	Mzc	Bioz.	Vishnevskaya V. S. 1985
Tethys Europe Greece	Tr.-Jur.	Strati Envir. Paleogeog.	De Wever P. & Dercourt J. 1985
Tethys Europe Greece Crete	Tr.	Metam. Strati	Kozur H. & Krahl J. 1984
Tethys Europe Greece Ionian	Cellov.-Tithon.		Karakitsios V. <i>et al.</i> 1988
Tethys Europe Greece Italy Sicily Turkey	Tr. Lias.	Taxon. Strati	De Wever P. 1982b
Tethys Europe Greece Pindos	Jur.-Cret.	Strati	De Wever P. & Origlia I. 1982a
Tethys Europe Greece Pindos	Lias.	Taxon. Radt	De Wever P. & Origlia I. 1982b
Tethys Europe Greece Pindos-Olonos	Dogg.-Malm.	Strati	De Wever P. & Cordey F. 1984
Tethys Europe Greece Pindos-Olonos	Jur.-Cret.	Taxon. Environ.	De Wever P. & Thiébaud F. 1981
Tethys Europe Greece Pindos-Olonos	L.Tr.		Zágorcevič I. <i>et al.</i> 1989
Tethys Europe Hungary	Mzc		Hojnos R. 1916
Tethys Europe Hungary Mehek	L.Jur.	Sedim. Strati	Nadj I. 1971
Tethys Europe Italy (Euganei)	Cret.	Taxon.	Squinabol S. 1903
Tethys Europe Italy (Euganei)	Cret.	Taxon.	Squinabol S. 1904
Tethys Europe Italy (Lagonegro)	Tr.-Cret.		De Wever P. & Miconnet P. 1985
Tethys Europe Italy (Ligur., Apenn.Mt.Alpe)	Jur.	dating	Conti M. <i>et al.</i> 1988
Tethys Europe Italy (Veneto)	Cret.	Taxon.	Squinabol S. 1914
Tethys Europe Italy Alps	Jur.	Ophiol.	De Wever P. <i>et al.</i> 1987
Tethys Europe Italy Alps Monginervo	Cret.	Taxon.	Squinabol S. 1912
Tethys Europe Italy Bolognese	Mzc	Taxon.	Neviani A. 1900
Tethys Europe N.Apen. Italy (La Spezia)	Tr./Lias.	Taxon. Strati	Ciarapica G. & Zaninetti L. 1982
Tethys Europe N.Hungary	Jur.(Bajoc.)	Taxon.	Kozur H. 1985
Tethys Europe N.Hungary	Jur.	Taxon.	Kozur H. & Mostler H. 1986
Tethys Europe N.Hungary Rudabanya	Mid.Jur.		Grill H.-J. & Kozur H. 1986
Tethys Europe NW.Yugoslavia	Mid.Tr.	Taxon. Biostr.	Gorican S. 1988
Tethys Europe Romania	Jur.-Cret.	Taxon.	Dumitrica P. 1970
Tethys Europe Russia Urais	E.Perm.	Taxon.	Kozur H. & Mostler H. 1989
Tethys Europe Slovenia (NW Yugosl.)	Ladin.(M.Tr.)	Taxon.	Kolar-Jurkovsek T. 1989
Tethys Europe Slovenia	Tr.-Jur.		Goncan S. & Kolar-Jurkovsek T. 1984
Tethys, Europe Spain, Sicily, SE France	L.Jur.- E.Cret.	Biostr.	Mañivit H. <i>et al.</i> 1986
Tethys Europe Switzer.	Mzc Czc	Taxon.	Jaccard F. 1909
Tethys Europe	Taxon.	N.Sp., Evolu.	Kozur H. & Mostler H. 1983
Tethys Europe Turkey	Lias.	Taxon.	De Wever P. 1984c
Tethys Europe Turkey	Lias.	Taxon. N.Sp.	De Wever P. 1982a
Tethys Eur. W. Carpath. Kysuca Klippen	Mzc	Biostr	Ozoldovec L. 1988
Tethys Europe W.Carpath.	Mzc Jur.		Kozur H. & Mock R. 1985
Tethys Europe W.Carpaths Meliata	Jur.		Kozur H. & Mock R. 1985
Tethys France Htes-Alpes	L.Jur.-E.Cret.		Turner J. 1965
Tethys German	Dog.		Heitzer I. 1930
Tethys Greece	Late Jur.	Taxon. Strati	Baumgartner P. O. 1980
Tethys Greece	Jur.-Cret.	Radt	Thiébaud F. <i>et al.</i> 1980
Tethys Greece (Evvoia, E.Greece)	Late Jur.-Earl.Cret.	Strati Taxon.	Baumgartner P. O. & Bernoulli D. 1976
Tethys Greece (Peloponnesus)	Jur.	Strati Sedim.	Baumgartner P. O. 1985
Tethys Greece Argolis	Jur.-Cret.		Baumgartner P. O. 1981
Tethys Greece Epireous	Jur.	Taxon. Strat.	Danelian T. 1989
Tethys Greece Epireous	Jur.-Cret.	Strati	Danelian T. <i>et al.</i> 1986
Tethys Greece Europe Asia Amer.	Jur.-Cret.	Radt Climat	De Wever P. 1987
Tethys Greece Hungary	Mid.Jur.-Cret.	Taxon.	Cordey F. 1984
Tethys Greece Italy	L.Jur.-Earl.Cret.	Strati	Baumgartner P. O. 1980

LOCATION	AGE	TOPIC	AUTHOR
Tethys, Greece, Italy Amer.C. Costa Rica	L.Jur.-Earl.Cret.	DSDP	Devos I. 1983
Tethys Greece Italy (Sicily) Amer.C. Costa Rica Indian	Jur.-Cret.	DSDP Taxon. Strati	Origlia-Devos I. 1983
Tethys Greece Italy Lombardia	Jur.-Cret.	N.Sp. Taxon.	De Wever P. 1981c
Tethys Greece Mediter. Karpathos	Cret.		Vinassa de Regny P. E. 1901-02
Tethys Greece Pindos Europe	Jur.-Cret. Baj.(?)- Tithon	Strati Taxon.	De Wever P. & Cordey F. 1986
Tethys Greece PindosZ. (S.Peloponnes.)	Jur.-Cret.		Thiebault F. <i>et al.</i> 1986
Tethys Greece Sicily, Turkey.	Tr.	Taxon. N.Sp.	De Wever P. <i>et al.</i> 1979a
Tethys Hungary (Darno)	Tr.	Strati	De Wever P. 1984a
Tethys Hungary Bukk	Jur.	Strati Biogeo	Kozur H. 1984e
Tethys Hungary Carpath. Bükk Meliata Uppony Mecsek	Mzc	Strati	Kozur H. 1984a
Tethys Italy	Mzc-Czc	Taxon.	Vinassa de Regny P. E. 1898a
Tethys Italy (Lombardy, Sicily) Japan (Shikoku)	Mid.Jur.-Earl.Cret.	Biostr. Strati	Alta Y. 1987
Tethys Italy (Sicily)	Jur.-Cret.	Taxon. Biostr.	De Wever P. <i>et al.</i> 1986b
Tethys Italy (Sicily)	Late.Jur.-Earl.Cret.	Biostrat. Taxon.	De Wever P. <i>et al.</i> 1985
Tethys Italy (Spezia)	Tithon.	Taxon.	Vinassa de Regny P.E. 1899
Tethys Italy Alps E.Carpathians (Rom.)	Tr.	Taxon. N.Sp.	Dumitrica P. 1978c
Tethys Italy Appennine	Jur.		Marcucci M. <i>et al.</i> 1987
Tethys Italy Bolognese	Jur.		Vinassa de Regny P. E. 1900
Tethys Italy E.Liguria (Mte Alpe)		Taxon.	Conti M. & Passenhi M. 1988
Tethys Italy Europe	Mzc Czc	Taxon.	Neviani A. 1901
Tethys Italy Europe C. Appennine	Cret. (Cenom.-Turon.)	Biostr	Marcucci Passerini M. <i>et al.</i> 1988
Tethys Italy France Liguria Europe Alps	Jur.-Cret.	Ophiol. Strati	De Wever P. <i>et al.</i> 1987a
Tethys Italy N.Appennine Corsica	Jur.-Cret.	Strati	Conti M. <i>et al.</i> 1985
Tethys Italy N.Appennines	Jur.	Stratig. ophiol.	Barret T. J. 1982
Tethys Italy N.Appennines	Jur.-Cret.	Strati	Conti M. & Marcucci M. 1986
Tethys Italy S. Tuscany		Biostr.	Conti M. 1986
Tethys Italy Spezia	Jur. Tithon.		Vinassa de Regny P. E. 1898b
Tethys Morocco (Rif)	Jur.-Cret.	Paleogeog. Strati Envir.	De Wever P. <i>et al.</i> 1985b
Tethys Morocco N.Rif	Jur.-Cret.	Taxon. Strati Radt	El-Kadiri Kh. 1984
Tethys NW Greece Ionian	Jur.	Biostr.	Danelian T. & De Wever P. 1988
Tethys Oman	Permian-Cret.	Biostr.	De Wever P. & Bourdillon C. 1988
Tethys Oman	Cret.	Strati Ophiol.	Beurrier M. <i>et al.</i> 1987
Tethys Oman	Perm.-Cret.	Radt Tethys strat.	Bourdillon C. <i>et al.</i> 1987
Tethys Oman (Hawasina)	Mzc Permian	Strati Paleogeog.	De Wever P. <i>et al.</i> 1988
Tethys Oman (Hawasina)		Strati	Blonde C. D. <i>et al.</i> 1983
Tethys Oman (Samail N.)	Cret.(Senon.)	Radt Taxon. N.Sp.	De Wever P. & Bourdillon C. 1988
Tethys Oman (Semail)	Cret. Campan.	Strati Taxon. Ophiol.	Schaaf A. & Thomas V. 1986
Tethys Oman (Semail)	Jur.-Cret.	Ophiol.	Tippit P. R. <i>et al.</i> 1983
Tethys Oman Hawasina	Mzc		Davis A. G. 1950
Tethys Pannonian Hungary	Mzc	Biogeo Strati	Kozur H. 1984c
Tethys Romania	Jur.-Cret.	Radt	Protescu O. 1933
Tethys Romania Carpath.	Cret.(Cenom.)	Taxon. Strati	Dumitrica P. 1975
Tethys Rotti Europe Italy	Mesozoic	Taxon. Strati	Riedel W. R. 1953
Tethys S.Alps.	Mid.Tr.	Taxon. Strati	Dumitrica P. <i>et al.</i> 1980
Tethys Tethys Oman Samail	Cret.(Senon.)	Taxon. Ophiol.	De Wever P. <i>et al.</i> 1988
Tethys Turkey	Lias.	Taxon. N.Sp.	De Wever P. 1981b

LOCATION	AGE	TOPIC	AUTHOR
Tethys Turkey	Lias.	Taxon. N.Sp.	De Wever P. 1981a
Tethys Turkey	Mzc	Ophiol.	Bailey E. B. & McCallien W. J. 1953
Tethys W.Carpath. Yugosl.	L.Jur.-E.Cret. (Tithon.-Neocom.)	Sedim.	Misik M. 1973
Tethys W.Slovenia	E.Cret.		Pavsic J. & Gorican S. 1987
Tethys Yugosl.	Mzc	Radt	Obradovic J. & Gorican S. 1987
Tethys Yugoslavia Slovenia	Jur.	Taxon.	Gorican S. 1983
W.Pacif.	E.Cret.	DSDP62 Strati Taxon.	Schaaf A. 1981b
W.Pacif. Indones. Borneo	Mzc	Strati Dating Ophiol.	Leong K. M. 1975
W.Pacif. Palawan Block, Philippines	L.Pzc-Earl.Mzc	Strati	Cheng Y.-N. 1989
W.PAcif.E.Australia (New England)	Pzc Mzc		Aitchison J. 1988
W.Pacific, DSDP Leg 61	Czc Mzc Cret.	Strati	De Wever P. 1981d
World	Mzc		Premoli-Silva I. <i>et al.</i> 1976